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The Meaning of Meaning in Rote Learning

Benton J. Underwood and **Rudolph W. Schulz**

Meaningfulness and Verbal Learning. Chicago: J. B. Lippincott & Co., 1960. Pp. vi + 430. $6.50.

Reviewed by ARTHUR W. MELTON

Benton Underwood, the senior author, is John McGeoch's academic scion and successor as the world's leading authority on verbal learning. In spite of the fact that he learned early about I, by churning butter on an Iowa farm, he turned as a graduate student to research on verbal learning and has been at it ever since. Rudolph W. Schulz received his PhD with Underwood at Northwestern, served there as Underwood's research assistant and since has been a frequent collaborator. He now walks the McGeoch - Underwood - Spence ground at the State University of Iowa. Arthur Melton, the reviewer, is known to a large number of psychologists as the hardheaded, softhearted and highly skilled editor of The Journal of Experimental Psychology *(not all who know him in this capacity know about his softness of heart). Many of the same psychologists and additional ones know him for his longtime and outstanding contributions to the psychology program of the Air Force, in which he was first the chief psychologist at the School of Aviation Medicine and later the technical director of the Human Resources Research Center of the USAF Training Command. He continues his contact with the Air Force but most of him has returned to an academic setting; since 1957 he has been in the psychology department at the University of Michigan. Some contributors to* JEP *will welcome the statement, true or not, that the following review has been not only heavily edited but also shortened by at least thirty percent.*

—F. H. S.

ALL psychologists know that Ebbinghaus invented the nonsense syllable in 1885 in an effort to discover the laws of associative learning and forgetting when the material to be learned was verbal but stripped of meaning. Perhaps fewer know that Ebbinghaus' naive definition of verbal naiveté has led, over the past 75 years, to an ever-increasing concern with the meaningfulness of nonsense syllables (e.g., VEC), consonant "syllables" (e.g., TKQ) and paralogs (e.g., VOLVAP), none of which may be found in Webster's *Dictionary*. The present monograph is an important milestone in this analysis of the effects of meaningfulness on rote verbal learning.

It may seem strange—to those outside the small band of psychologists devoted to the analysis of learning through the operations of rote verbal learning—that such general concern and intensive effort should be directed to the question of the meaningfulness and learnability of non-word units. The reason is that "There are very few variables which produce any marked effect on the rate of verbal learning shown by the adult subject. Of these few variables, meaningfulness is by far the most powerful" (p. 4). This statement has behind it the wealth of Underwood's experience plus the consensus of his colleagues. An important secondary reason for concern about the meaningfulness of such units is methodological. Ever since Glaze showed in 1928 that nonsense syllables varied widely in association-value, investigators have attempted to control the learnability of verbal items by selecting them in terms of some index of meaningfulness. A number of different methods for assessing learnability or meaningfulness directly or indirectly have been devised and tested—the number of subjects having an association, the number of associations to an item in a fixed-time period, ratings for meaningfulness, ratings for learnability, semantic differential ratings, pronunciability ratings—but there always remained a substantial variance in learnability that could not be predicted. Thus, meaningfulness in rote verbal

learning deserves an all-out effort because it is intrinsically important for a theory of verbal learning and forgetting and because it is the key to further refinement of the methodology of investigations where verbal units are used as stimuli or responses.

The first of these two reasons for all-out effort is continuously in focus in the present book. The methodological contributions are very substantial, but implicit. The central theme is the effect of the meaningfulness of the single verbal unit (engram, bigram, trigram, paralog, or word) on the learning of it in serial lists, where its stimulus and response functions are confounded, and in paired-associate lists, where its stimulus and response functions may be assessed separately. As might be expected from a man and his prime collaborator both of whom have all the earmarks of S-R functionalists, there is immediate and sustained disavowal of concern with the complex of meanings of *meaning* that worries philosophers, semanticists, and even fellow-experimentalist C. E. Osgood. Rather, meaning is referred to consistently as *meaningfulness (M)*, and this is defined by response measures obtained in the laboratory.

After this introductory definition of the scientific problem and of *M*, Chapter 2 examines the varieties of specific operations employed by 11 investigators to define *M* either directly or indirectly, but excluding Osgood's Semantic Differential. There are high correlations between the *M* indices in spite of sometimes radical differences in method. Chapter 3 examines the literature on rate of learning as a function of *M*, with the conclusion that when the stimulus and response terms covary (serial learning), there is a direct relationship between *M* and rate of learning, and when stimulus and response *M* are varied independently (paired-associate learning), both *Ms* are directly related to learning rate, but the relationship is much stronger for response *M* than for stimulus *M*. In Chap. 4, a search is made for an objective variable other than the response-defined *Ms* that can be considered to be the determinant of *M* in general. Some cogent, though not compelling, reasons are given for rejecting pronunciability, familiarity, and number of associates as suitable. Instead, the case is made for considering *frequency of experience* (F) as the fundamental variable determining *M*. Even though it is recognized the frequency would need to be determined not only for written or printed letters and words but also heard and produced phonemes and words, the former (frequency in print) is accepted as a suitable index of frequency of experience until the "final appraisal" (Chap. 11). In support of this limited index of frequency there is a quite original summary and extension of what is known about engram, bigram, and trigram frequencies in printed language, and a demonstration that these frequencies correlate quite highly with association values *(M)* obtained by Glaze and Witmer for CVC and CCC trigrams.

Now, $M = F$, and from this one hypothesis flow three others (Chap. 6). The first is that *M*, and therefore *F*, has its effect on rote learning principally through its effect on response integration and hence availability, rather than on the S-R associative, or "hook-up," process. This position is consistent with recent evidence that both serial and paired-associate learning involve distinct, though perhaps temporally overlapping, response-learning and associative phases. A second, "spew" hypothesis is introduced to account for the beneficial effects of *F*, and hence *M* (response integration), on the rate of learning, and does this by asserting that the *order* of emission of verbal units by the individual subject will be a direct function of prior *F*. Clearly, this is a special case of the familiar S-R principle of a response hierarchy. The third hypothesis, that there is a "selector mechanism," is then introduced to account for the fact that subjects rarely make extralist response errors even though there may be many potential responses outside the verbal list that have much higher *F*s than those within the list. So, the familiar notion of "set," here probably determined in large part by the discriminative encoding of the material ("these are nonsense syllables") and by short-term memory, is found to be a necessary adjunct to the "spew" hypothesis in order to adjust to the reality of human performance the expected effects of *F* and *M* on rate of learning and errors in learning.

The evidence in the literature that supports the "spew" hypothesis, and it is considerable, is reviewed in this book, and then 14 experiments on learning as a function of *F* and *M* or pronunciability are presented and discussed. The first set (Exp. 1, 2, 3) manipulate *F* by pre-learning familiarization training to induce response integration. As expected, serial learning was clearly facilitated by such training, but in paired-associate learning only R familiarization was beneficial to learning. Stimulus familiarization was, if anything, detrimental. The next four experiments (Chap. 7) manipulate *M* values of R units in paired-associate learning in terms of Glaze or Witmer association values, trigram frequency counts in printed language, and pronunciability ratings. When R units were constructed of letter sequences that rarely occur in printed words, learning rate could be predicted by simple summation of the letter frequencies for each R unit. However, trigram frequencies, as determined from printed text, were not closely related to learnability. This apparent failure of the frequency hypothesis led to six new experiments (Chap. 8) which showed that R learning is substantially related to the frequency of single letters in English text, but that the relationship between learnability and *F deteriorates* as the R units become bigrams and then trigrams, with the relationship essentially zero for the latter. Pronunciability, rather than *F*, seems to be an important determiner of *M*.

The final experiments (Exp. 15 and 16) and some fascinating normative studies and analyses on letter-association frequencies are reported in Chapters 9 and 10. The rationale is straightforward. A direct measure of the strength of letter-sequence habits might substitute for, and be better than, frequency counts of letter sequences in printed text. Single letter responses to each letter and to each possible letter pair were obtained from 273 college

students, and are presented in the Appendix. It is clear that these letter-association data have the advantage that they reflect not only the frequencies of letter sequences in words, but also alphabetical sequences (AB—C), response continuations (AA—A), and common initials (IO—U). But perhaps of greatest importance is the fact that these letter responses should reflect the influence of all forms of frequency of experience (seeing, hearing, writing, saying) on sequential dependencies in the *production* of letter responses. While these norms show some relation to the frequencies of letter sequences in words, the degree of correspondence varies widely with the vowel-consonant structure of the stimulus bigram in the association test, and the norms do not predict at all well the differences in association values within the CVC nonsense trigrams or within CCC nonsense trigrams, although they do predict the well-known difference between the association values of CVC and CCC trigrams. When these letter-association frequencies are used to "generate" trigrams of different letter-sequence association values, these association values correlate highly with rate of learning, whether the trigram is used as the S or R term in paired-associate learning, but again the effect is much more pronounced in R learning. However, again, pronunciability predicts learning rate better than the letter-association frequencies.

In the "final appraisal" (Chap. 11), the authors conclude that there are no firm grounds for rejecting the frequency hypothesis (when supported by the "spew" and "selector mechanism" hypotheses) in the case of learning single letters as responses (on the basis of substantial data), in the case of words (sketchy data), and in the case of very poorly integrated responses (CCC trigrams of low association value), but that frequency seems inadequate to explain differences in the learning of trigrams in the broad range between the well-integrated and poorly-integrated units. However, pronunciability does predict well within the middle range, and the frequency theory can therefore be saved by shifting the basis for determination of F from frequency in printed text to frequency of emitted verbal responses.

The final appraisal also includes a substantial consideration of the associative, or "hook-up," phase of rote verbal learning, even though none of the research had been aimed directly at this problem. The notion that M might affect the associative phase through stimulus integration analogous to its effect on response learning through response integration is examined and rejected in favor of an associative probability theory. The latter theory is that the stimulus and response become associated as a function of the *number* of associates to the stimulus (and to the response, in which case its effect would be through "backward" associations or other meditating mechanisms). Although some relevant new data are presented here, the main contribution is the examination of the data reported elsewhere in the book for implications relevant to the issue of stimulus-integration vs. associative probability in the associative phase of verbal learning.

From what has been said, it should be clear that all future investigators of the meaningfulness variable in verbal learning must know this book. The same may be said of those who concern themselves with transfer of learning and forgetting, in view of the strong evidence, provided eleswhere in the writings of Underwood, that proactive facilitation and inhibition of learning and retention relates closely, in the case of verbal materials, to the extent to which the new learning is compatible or incompatible with the letter-sequence habits and word-sequence habits of the learner. Finally, psychologists who use verbal units for any experimental purpose must consider carefully the evidence in this book regarding the effectiveness of their "control" of M. These statements follow from the empirical contributions of the book—the 16 experimental studies, the normative data, the observed intercorrelations of measures of M and their relationship to rate of learning, and the searching review of the related literature.

The theoretical contributions are, however, somewhat less definitive, except in the case of the response-integration hypothesis about rote verbal learning, which is thoroughly exhibited and substantiated. The basic objective of the program of research was, first, to establish the R-R laws that relate the characteristics of verbal units, as defined in response terms, to the rate of learning, as defined in response terms, and second, to move toward S-R laws that would integrate these R-R laws. The first goal was achieved, but the second was not. After hypothesizing that frequency of experience is the fundamental independent variable determining M, it was concluded that frequency (as indexed by frequency of exposure to printed letters, letter combinations, and words) must be bolstered by an index of pronunciability if learning rates are to be predicted with any precision. Since no independent measure of frequency of *pronouncing* is attempted, the pronunciability-rate of learning relationship remains an R-R law. Obviously, then, this book is a strong beginning, but only a beginning, of the S-R analysis of M and its effects on learnability.

Different readers will surely have different notions as to why this great amount of work merely sets a more firm foundation for the generation of new theories and new research on the problem. Some will surely say that the difficulty stems from the use of letters as the basic units, when phonemes would have served better; some will say that the difficulty stems from a neglect of semantic mediators as the proper focus for theory and research; some will say that the focus should have been on the frequency of *use* of verbal units by subjects; some will say that the S-R analysis of M must be approached intra-individually, rather than in terms of norms for a population of subjects. In short, readers will have little difficulty in finding justification for a number of alternatives to the research strategy of Underwood and Schulz—after the fact—but if one of these other strategies proves more successful, the historian will surely credit the motivation and very likely credit the success

of the new strategy to the impact of this book.

More likely to become immediately embedded in the language of research on rote verbal learning are "spew" and the "selector mechanism." While evidence cited for these hypotheses is important, perhaps the main effect will be the naming of special applications of the old familiar hypotheses of S-R theory, the response hierarchy and the response set. This identification of these hypothesized mechanisms with more general traditional hypotheses does not degrade them; rather, the new hypotheses gain credence from the association.

THERE remains a final, and unfortunately painful, set of comments that must be made about this book, else those who read it will not be prepared for the difficult exercise in information extraction. The difficulty relates to the quasi-temporal organization of the book, especially as it pertains to the reporting of the hypotheses and the experiments, and the lack of proper integration (and some inconsistency) in the discussion of the same data and ideas at different points in the book. The quasi-temporal organization was, of course, intentional; the lack of integration results from the widely distributed discussion of data and ideas; the occasional inconsistency must have been a consequence of the almost incredible fact that the book does not have a subject index.

The first reaction of the reader to the reporting of the ideas and experiments in the order in which they were had or done may well be favorable. Such was the reviewer's experience. It was a case history of two highly competent scientists at work on a problem. However, *study* of the book leads to progressive disillusionment and the hope that others do not attempt the same experiment in scientific communication, or if they insist upon doing so, that they ease the readers' problem by an index and use the making of an index to double-check the consistency of statements.

As an example of scattering, the notion of meaningfulness as "associative probability" is examined on pages 45-49 (where it is tentatively rejected), on p. 96 (where something like it is used to explain the integration of trigram responses), on p. 261 (where one previous argument against it is withdrawn), and on pp. 293-305 (where associative probability is accepted as the basis of the S-R "hook-up" phase, which obviously is a part of trigram response integration). Again, the reader must scan the whole book to pick up references to new data and discussion on the problem of stimulus *M* versus response *M* in paired-associate learning.

As an example of inconsistency, in Exp. 5 (pp. 131-144), eight common 3-letter words with Thorndike-Lorge ratings of AA, A, 8, or 2 were learned as responses in paired-associate lists. There were no significant differences in rate of learning as a function of Thorndike-Lorge ratings. However, on p. 295, it is said that "Although the differences in learning among these items were very small, the number of associates predicted learning very well," and by p. 301 this had become a "high relationship between number of associates elicited and rate of learning." There are a few other instances such as this; not crucial, but disturbing.

There is no intent to deflate the contribution of *Meaningfulness and Verbal Learning* by pointing to these deficiencies. Rather, it is hoped that these comments, fortified with the experience of many others who must know and use the important data and concepts in this book, will be sufficient to insure that future research books—and there should be many of them—have a subject index and that the authors of such books insist upon having the help—even though painful—of a hard-nosed editor *before* the book is published, because research books, like our journals, become a part of the permanent archives of our science.

Studying Development with Little Design

Percival M. Symonds with Arthur R. Jensen

From Adolescent to Adult. New York: Columbia University Press, 1961. Pp. xiv + 413. $8.75.

Reviewed by WILLIAM T. SMELSER

The late Dr. Symonds, the principal author, was Professor of Education in Teachers College, Columbia University, ever since 1924. He has written many books of which the most recent are the three volumes of his Dynamics of Psychotherapy *(Grune and Stratton, 1956-1958;* CP, **2**, *39f.;* **3**, *53f.;* **4**, *360f). Jensen was Symond's assistant in 1953-1956. After that he worked with Eysenck at the Maudsley in London, and then in 1958 went to the University of California at Berkeley as Research Associate in the Institute of Personality Assessment and Assistant Professor of Educational Psychology. A year ago he reviewed Leeper and Madison's* Toward Understanding Human Personalities *(Appleton-Century-Crofts, 1959;* CP, *Nov. 1960,* **5**, *353-355). The reviewer, Smelser, had his PhD in clinical psychology from the University of California at Berkeley four years ago and is still there, now as Research Assistant in the Institute of Human Development.*

—E. G. B.

THE purpose of this follow-up study of subjects tested and interviewed as adolescents was to determine "the predictive value" of the initial findings in the light of interviews and tests 13 years later with 28 (12 men and 16 women) of the original 40 subjects (20 men and 20 women). The adolescent material was gathered in 1940-1941; the follow-up material in 1953, when the late Dr. Symonds was Professor of

Education at Teachers College, Columbia University. Dr. Jensen, who was involved in the collection and analysis of the follow-up data, is now Assistant Professor of Educational Psychology at the University of California, Berkeley.

Actually, no predictions were made concerning the behaviors of the young adults. Comparisons were made between the early and later findings, comparisons that ranged from descriptions of appearances to social relationships to dynamic formulations of drives and affective states.

The major focus of the study is the relation of adolescent fantasy life (as tested by the Symonds Picture Story Test) to adult fantasies (Symonds Test and Rorschach) and adjustment. Several principles were set forth concerning the function of fantasy in personality: fantasies pose "problems that have not been wholly and successfully worked through," or, "a change in fantasy is a function of change in environment." The evidence for these principles is presented, for the most part, in rather brief case histories that compare adolescent fantasy themes (e.g., dependency, aggression) with subsequent experiences (e.g., marital relationships, occupational adjustment). Statistical comparisons between the incidence of adolescent and adult fantasies show several clear changes: e.g., greater disenchantment in the adult fantasies. Since the data which indicated change in frequency of themes are not presented for males and females separately, an examination of possible sex-linked changes in fantasy is not possible. The reliability of the Rorshchach interpretations is unknown, for they were all made by one judge.

The comparisons of adjustment ratings made in 1940 and 1953 omit any clear statement concerning the meaning and definition of adjustment. The authors do go into some detail examining those subjects where there was greatest interrater disagreement. The extent of the contamination in the ratings is difficult to determine, since the senior author was involved in both the adolescent and adult ratings. Again, ratings of males and females are not presented separately.

A "resumé of the subjects" (condensation of findings for each subject) occupies one third of the book, which the authors state contains "the main facts about each of the subjects," although significant information presented in earlier sections of the volume is sometimes missing in the resumé. The nature of the resumé points up one of the major shortcomings of the book: the authors do not go further in their analysis by *grouping* the subjects into meaningful classes. For example, there are five males in the study who work for their fathers. Do the adolescent fantasies concerning male authorities differ from the adolescent fantasies of the remaining males in the sample? Other groupings, like current marital status, physical health, involvement in psychotherapy, are also possible and would facilitate an examination of the predictive value of the adolescent findings.

It is unclear how systematic was the coverage of actuarial facts (e.g., amount of formal education, socio-economic status), since there is no systematic presentation of such findings. The fact that a more systematic presentation *and* analysis of the data was not made may be due in part to a lack of a clear statement of rationale or theory concerning human development (or both). This lack of design is reflected in a characterization of the interviewing techniques—"a shotgun approach" (p. 13).

The presentation of the findings suggests hypotheses for further organization of the data; yet one searches in vain for *systematic* data concerning each subject so as to look for relationships. For example, it was necessary to go back to the senior author's book *(Adolescent Fantasy)* containing the adolescent findings to ascertain the IQ for a number of the subjects in the follow-up study. Nowhere is there a clear, consistent presentation of a parent's perception of a subject, though parents were interviewed (p. 3). More clarification of the significance of early and late fantasies could have been made by presenting more information concerning, for example, intellectual functioning (school grades), interpersonal impact (teachers' ratings), or family setting (education, religion, occupation of the parents, sibling order of the subject). This lack of use of independent data, plus the use of adjustment ratings as criteria, provided more of a task than necessary for the predictive value of adolescent fantasies. The correlation of +.34 between the adjustment ratings made by the two authors indicates the lack of a satisfactory criterion.

In short, the authors deal with the complex and intricate subject of personality development but employ a less adequate research design and execution than is necessary, when one considers the variety of data they have gathered across time and at different levels of functioning.

Ego and Id Retranslated

Sigmund Freud (Translated and edited by **James Strachey**).

The Ego and the Id. New York: W. W. Norton, 1961. Pp. 88. $3.75.

Reviewed by HERBERT J. SCHLESINGER

The author of the present book is a well known Viennese psychologist and physician. Herbert Schlesinger is chief clinical psychologist at the Menninger Foundation and, at the same time, serves as a) Executive Assistant and Training Analyst at the Topeka Institute for Psychoanalysis, b) a faculty member of the Menninger School of Psychiatry and c) a member of the Editorial Board of the Bulletin *of the Menninger Clinic. He received his PhD from the University of Kansas and is a graduate of the Topeka Institute of Psychoanalysis. His research interests, over the years, have varied from test construction to the area of perception and personality.*

—F. H. S.

WRITTEN in 1923 and first translated into English in 1927 (by Joan Riviere) *The Ego and the Id* now appears separately in the new translation prepared as part of a project to

publish a definitive edition of the psychological works of Freud in English.

One of the last of Freud's major theoretical statements, this brief essay has left its mark on all subsequent psychoanalytic writings. It introduced the now familiar structural model of the mind; id, ego and super ego, which Freud offered when it became clear that the repressing forces, assigned to the system 'Consciousness' of his earlier model, actually operated largely out of awareness. Thus, the 'repressed' and the repressing forces could no longer be equated with the Unconscious and with Consciousness. This revision had far-reaching consequences, particularly for the theory of ego functioning and the super ego. Consideration of the functions henceforth subsumed under these new names did not begin with this work, but the new model provided a setting in which earlier fragmentary and fleeting references to these matters could more profitably be assembled and investigated.

A comparison of the 1927 and the present translations at a number of crucial passages favors the new translation both for clarity and sense. But there are obscurities in this essay which no mere translation can be expected to eliminate. For brilliant as he was as an innovator, Freud was, from time to time, quite inconsistent about adopting his own innovations and reformulations. Strachey's genius as editor as well as translator thus makes for the vital difference between this version and the earlier one. The serious student of Freud will appreciate Strachey's lengthy introduction to the book, which sets the historical context, discusses the issues that led Freud to write it and traces the development of some of the significant ideas that are elaborated in it. In two appendices, Strachey takes up Freud's inconsistent usage of the term Unconscious in its descriptive and dynamic senses, and the term "reservoir of libido" which he attributed both to the ego and to the id at different times. Strachey achieves such clarity about these issues as can be reached through the methods of scholarship and makes the task for future innovators that much easier. In addition, and of at least equal importance, Strachey has annotated the text of the essay and has provided frequent cross references.

Strachey's introduction and appendices (which together occupy a space equal to more than a fourth of the text) as well as the notes and references so enhance this edition that even those who own the 1927 translation will want the new one.

After Twenty One Years, CR_2

Ernest R. Hilgard and Donald G. Marquis

Conditioning and Learning. (2nd ed., rev. by Gregory A. Kimble.) New York: Appleton-Century-Crofts, 1961. Pp. xii + 590. $6.75.

Reviewed by W. J. Brogden

Almost everybody knows everybody involved in this book and in this review. There is Ernest Hilgard, now back to doing research at Stanford after periods of deaning and other important if unassessable activities. There is Donald Marquis, now involved in only moderately describable activities at M.I.T. after some years of highly successful administration at Michigan and at SSRC. There is Gregory Kimble, who so far seems to have dodged administrative assignments in order to write and to carry forward his research on animal learning and, more recently, on eyelid conditioning. Since 1952 he has done his research and writing at Duke University, having moved to Durham after enough time at Iowa to take a degree with Spence and after seven subsequent years divided between two other reputable institutions—Brown and Yale. His highly regarded introductory textbook Principles of General Psychology *was published in 1956. Wulf Brogden, who reports himself to be aware of his age, took his degree with Culler at Illinois and then, in the late thirties, spent three years at John Hopkins where he was primarily associated with Gantt while working on conditioning in dogs. Since 1939, except for a wartime stint in NDRC, he has been steadily and sturdily at Wisconsin where his research has focused on animal and human conditioning and on verbal learning, with occasional excursions into tracking and into audition. He will be remembered as the author of the chapter on "Animal Studies of Learning" in the Stevens* Handbook of Experimental Psychology. *Aside from his intellectual pursuits, he is involved in farming and fishing. He farms with trees and fishes with flies.*

—F. H. S.

Twenty-one years after the publication of Hilgard and Marquis *Conditioning and Learning* comes Gregory Kimble's revision, another complex CR of the same name. Comparison of the two reveals many similarities and more differences. The first edition includes 13 chapters, a glossary, references, author and subject indices. The second edition includes 14 chapters, a glossary, references, author and subject indices. The magnitude of the second CR is greater than the first by 161 pages and it lists 1389 references, 416 more than the 973 listed in the first. Four chapters of the first edition, those on serial learning, problem solving, voluntary action, and neurophysiological mechanisms do not appear in the second edition. New chapters in the second edition deal with (a) practice and the strength of conditioning, (b) secondary reinforcement, (c) general theories of reinforcement, (d) mechanisms of reward, (e) motivation and learning, and (f) applications to personality. The second edition, though larger than the first, actually covers fewer topics, and emphasizes motivation and theory to a greater extent.

There is a much greater difference between editions than that reflected in the comparisons given above. Of the

1389 references in the second edition, 1009 (72.6%) have publication dates of 1940 or later. No more than 380 references (39.1%) in the first edition have survived. The discard of 593 references is not solely a function of dropping four chapters, since some of this material has been worked into the reorganization of the second edition. Nor do higher standards for evaluating research studies account completely for the discard; for example, Bair's confused, uncontrolled study published in 1901 is cited in both editions. The loss of earlier primary literature in secondary writing seems to be a general phenomenon and may represent a serious failure to use adequately the already existing sources of knowledge. Examination of the index numbers of *Psychological Abstracts* reveals a listing of 69,989 titles from 1927 to 1939 of which 708 (1.01%) are classified under conditioning and a listing of 133,773 titles from 1940 to 1959 of which 1367 (1.02%) are classified under conditioning. The total of 2075 titles on conditioning alone raises a question about the adequacy of coverage by Kimble, since many of the 1389 references in his edition would not be classified under conditioning. In line with these figures, the second edition appears to be devoted relatively more to learning and relatively less to conditioning.

If conditioning represents only one per cent of the titles listed in *Psychological Abstracts* from 1927 to 1959, is this a valid measure of the importance of conditioning to psychology as a whole or of the number of psychologists who will read Kimble's book? This reviewer thinks not. Conditioning is a major component of the science of psychology. Its principles are important conditions for other forms of behavior and its techniques have widespread use in the investigation of other topical areas. Kimble's edition should be read and studied by every research psychologist working in the general area of learning. Every behavioral scientist will find it worth reading. It should be required reading of every aspirant to the PhD degree. It will be used widely in graduate proseminar courses and in seminars.

Kimble writes very well. His language is clear and concise. The topical organization within chapters is excellent, and amenability to such organization undoubtedly was a primary principle for the selection of studies to be included. The large number of figures and tables is a noteworthy feature. The summaries at the end of each chapter are jewels of compact, precise, and clear communication. In usefulness to the student they will surpass any of the newly touted teaching machines.

The two initial chapters on the definition of learning and conditioning in historical perspective might better have been combined into a single brief introductory chapter, thus allowing for the presentation of more experimental research. The first chapter in particular

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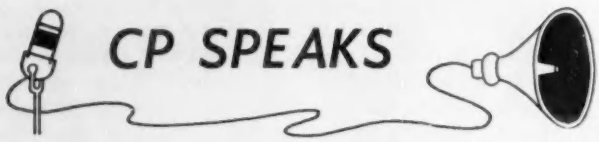
is overwritten. It also presents the cumbersome abbreviations UCS and UCR respectively for unconditioned stimulus and unconditioned response. The simpler US and UR would have been less costly in terms of typesetting and printing. The historical perspective is useful to the reader and introductory to the material that follows. Kimble changes the classification of instrumental conditioning to categories of reward training, avoidance training, omission training, and punishment training, but in comparing classical and instrumental conditioning there is virtually no treatment of omission and punishment training. Chapters 5, 6, and 7 are presentations primarily of empirical data with only limited discussion of theory. Chapter 8, on general theories of reinforcement, is a good summary, with some evaluation. Further consideration and evaluation of theories is made in the following chapter on mechanisms of reward. Theory continues to be heavily represented in the chapters on extinction, generalization, discrimination, and on motivation and learning, but there is also considerable discussion of experimentally obtained data. The final chapter on applications to personality sticks out like a sore thumb. It doesn't belong with the rest of the material in the book. This chapter has no organizing principles in terms either of personality or of conditioning. Compared to other chapters there are relatively few references to experimental studies. The glossary is a useful device, especially to the novice in the field, but credit for the origin or definition of terms is not given consistently.

READING this book makes it clear that there has been an enormous increase in the amount and quality of research on conditioning since the first edition, and particularly during the past decade. It is comforting to see a substantial number of well planned, well conducted parametric experimental studies, but disappointing that the number is not larger. Unfortunately the day of the simple experiment with one control group and one experimental group has not past. The relatively naive theories of learning and conditioning seem to thrive both on lack of knowledge and on formulation in terms that prevent their being tested by experiment. They have pushed research into some blind alleys, produced a number of irrelevant 'critical' experiments, and either facilitated or impaired gains in knowledge depending upon one's point of view. It is clear that conditioning is complex rather than simple and that although further research will provide for further understanding it will also demonstrate further complexity. If the third edition of *Conditioning and Learning* appears twenty-one years hence, let us hope that Kimble's writing behavior will not have suffered experimental extinction. A job well done now is predictive of a job to be well done in the future.



Acorns of Decision

IN the production of any issue of *CP* there is invested a great deal of effort, skill, inventiveness, feeling and human fallibility both plain and fancy. Final publication is the outcome of a long interwoven sequence of large and small decisions. There are the difficult and crucial decisions by *CP* consultants who bear the major responsibility for determining whether any given book shall be reviewed and, if so, at what length and by whom. Then there are the discriminations and decisions, often even more significant, made by the reviewer himself as he performs the task of appreciating a book in which the author's whole soul may be invested and which may or may not contain material that will alter the course of psychology. Then, of course, there are the decisions made in the editorial office. Here there are hundreds of decisions—or at least hundreds of responses—per issue. No one of these decisions, however much time it may take to make it, seems very important of itself. (Little ten cent decisions are, incidentally, just as difficult as million dollar decisions if one encumbers himself with the aspiration to be right.) But there are probably trends and consistencies in the way these decisions get made, so the unimportant by accumulating may become important. It is the feeling in the editorial office that the more *CP's* readers and writers know about the operating of the journal, both at the level of policy and at the grubbier level of diurnal chores, the more able they are to use *CP* profitably as it is, and the more likely they are, through informed and adaptive fussing at it, to make it what they think it should be.

The present screed deals, in the form of a diary of a day's events, with the activities of *CP's* editorial office.

8:07. Editor arrives. Whole day free, as far as he knows, for *CP* work. Better start off with writing chores. Sentences come out shorter and better in morning, longer and worse as day advances. For next issue need thirty or so biographical sketches of authors and reviewers. Better do some. First review has multiple authors. Terrible. Cannot write about each. Cannot find way to write about all. Reviewer identifies each in his review. Maybe that's enough. Reviewer wellknown psychologist, gives little information about self. Assumes *CP* knows. *CP* does, but much available knowledge irrelevant, remainder probably unprintable. Point out his clinical experience, not widely known but most relevant for review of present book.

8:28. Secretary checks in. Nope. No new work. Finish yesterday's dictation and work on list of books received. And cheer down. Nobody should be cheerful before 9:00 o'clock. See if the coffee's ready.

8:30. Tackle another biography. Author not psychologist but book is psychological. Author has strange history. Can't see how present book comes out of his intellectual past. Say so? No. Imply it? No. Simply report facts. Always trust *CP* readers to make own interpretations. Reviewer's sketch of self very delightful. Print it as is? Better not. Too diffident. Maybe too revealing. Clothe him some, and extirpate modesty.

8:47. On to another biography. Material on reviewer fine. Can use it almost as is. Trouble with one of several authors. Reviewer knows only that this one is a sociologist. Phone sociology department. Never heard of him. Can't find him listed anywhere. Maybe in anthropology. Call anthropology. Same result. Have to write publisher, will use information if it comes in time.

9:16. Editorial Assistant comes in with mail. Assistant late, mail on time. Assistant thinks mothering more important than editing. Go through mail. No checks. Three reviews, two new, one grumpily rewritten. Hold for later reading. Letters from two consultants concerning total of seven referred books and their potential reviewers. All books recommended for review. Assistant takes notes on reviewers to be contacted first. Two postcards from reviewers saying they had received books *CP* had sent them. Three cards from nominated reviewers all agreeing to review. Fine batting average there today. Assistant will see that books are sent. Letter from Boring enclosing a letter sent to him, too late, for "On The Other Hand." Seven new books. All fascinating. Five seem psychological, two probably not. Editor wants to read them all. Assistant says editor is crazy. Editor resolves to take rapid reading course next semester. Put two books in pile to be sent Anne Roe, ticket one each for Frank Geldard, Vic Raimy, Bob Sears, and Gardner Lindzey, save two to puzzle over.

9:58. Assistant goes off to chat with secretary about mothering, to set various mills to turning, to send out books, to list new books, to dash off some letters left over from yesterday, to read proof, to ask Benton Underwood and Jean Piaget for photographs, to do other things editor does not understand and plans not to learn about.

9:59. Back to biographies. After third cup of coffee editor tries dictating biographies instead of scratching them out longhand. No better. Reviewers report too little about authors. Reviewers much more interesting than they make out. Editor too slow, too unimaginative. These little squibs can serve important functions. But shouldn't be dull. Needn't be dull. Trouble not in subjects. Editor never met a genuinely dull psychologist. Maybe squibs will get better and easier with practice.

11:45. Seven more biographies drafted Still need about twenty additional for next issue. Better do some letters now. Dictate one to Boring saying we'll run the enclosed letter in On The Other Hand, but wouldn't it be better and more interesting if he would comment on it? Letter to reviewer with suggestions for revision. Tough letter to

write. Cannot simply tell a fellow to revise. Have to say what and, oh misery, why. Letter to reviewer who has been dead silent for six months about a review due a month ago. Letter to Arthur Lumsdaine about review we wrongfully solicited of book properly classified in instructional media. Letter to Daniel Katz thanking him for suggesting a book for review; happily it is already in *CP's* mill, with review coming. Three letters acknowledging reviews received yesterday, giving general impressions and saying we'll write later about any serious problems.

12:30 Secretary brings in typed letters for signing. Has done more than her official half day's work. Changes role, off to mothering.

12:33. Peripheralization.

1:15. Tear into stack of eight reviews recently received. Read for general meaning, hunt for major problems, check sentences and paragraphs likely to need major work, think about titles. Mark one of eight for probable return to author. Among other things, naked negative adjective must be supported by evidence. Cannot be repaired here. Too much risk of changing reviewers intent. Precarious business, diddling with another man's sentences. Must work on this one soon. Other seven can wait awhile. No serious problems except all seven run over the requested length. All APA editors must be tight with space.

2:50. Local colleague drops in with book he thinks *CP* might well review. Book deals with science in its social setting. Has it general relevance for psychology? Chat for a while about society's acceptance of psychology, particularly as psychology increasingly gains the power that inheres in knowledge. Get nowhere much. Editor agrees to put book into *CP's* processes to see what consultants say about reviewing it.

3:10. Assistant goes home after making arch remarks about her allegedly half-time job; leaves on editor's desk a final (?) copy of the list of books received and nine reviews with copy marked for printer, and issues instructions for editor to bring home three dozen eggs and some bourbon. Eggs and *bourbon?* Okay.

3:15. Work on pile of reviews that seem to need only final checking and editing. Most frequent problem in this batch is that editor, in empathy with reader, can't always tell when the reviewer is giving his own ideas and when the reviewer is setting down author's points. Better write to two of these reviewers to make sure. One ad hominem turns up. Rich and picturesque and wonderful—and out of bounds. In all reviews have to watch for tendency to substitute editor's preferences for writer's preferences. Can't try to change reviewers' style, must edit only to make meaning clear and reader's life a little easier. One review has serious which-that problems. Infected the editor with which-that problems which (that?) he could not solve without Fowler and/or the APA *Publications Manual,* references that (which?) are indispensible for anyone who wishes to write psychological English which (that) is reasonably proper. Editor's intuition tells him how to which and when to that but can't write mere intuitions to a writer. Need rules and reasons. Look them up tomorrow. Stupidity setting in.

5:22. Look over notes for tomorrows lecture to freshmen and head for the eggs and bourbon store. Eggs and *bourbon?*

Books to Come

CP has some difficulty obtaining advance information from either publishers or authors about books soon to be published. Publisher's mechanisms do not seem to be designed to yield such information and authors, when we find out about them, are either too modest or too deeply sunk in a refractory phase or too encumbered with closure to tell *CP* very much.

We did, however, garner from Wendell Garner some material on his book, *Uncertainty and Structure as Psychological Concepts,* to be brought out by Wiley in the Spring of 1962. He says that the book will deal with matters ranging from perceptual discrimination to pattern perceptions to the learning and use of language to concept formation. The underlying themes are uncertainty and structure, two concepts he develops from the mathematics of information theory. He says, however, that the book is not one on communication theory. It's purely psychological.

Wilbert McKeachie, *CP's* consultant on undergraduate texts, has crashed through with the following report on introductory texts to come:

It requires a great deal of courage or avarice to send a new elementary textbook into the rough competition of the introductory course. Almost every teacher of the introductory course is besieged to write a text, besieged by representatives of old publishers who "want to do something distinctive" (and commercial) or by new publishers who "are prepared to go all out to make our entry into the field successful."

The books due to emerge this season, however, promise to be relatively free of crass commercialism and to offer some interesting alternatives to the present front-runners.

Dean Frank Geldard of the University of Virginia is carrying on the scientific tradition of his book's highly respected ancestor, the text by Boring, Langfeld, and Weld. He defines psychology as the science of *human* nature and covers all the important topics in modern general psychology, with an approach like the *rondo* in which the main themes of motivation, learning, and perception come round and round always advancing to new levels.

Professor Donald J. Lewis of Rutgers University also emphasizes learning, stressing experimental method and the data derived from experiments. Like Geldard's, Lewis's text is strongly scientific in emphasis.

Vying with these newcomers will be rejuvenated versions of some familiar contenders. Munn, the Warren Spahn of the textbook field, is following his ancient rival's lead in bringing out a briefer version of his Fourth Edition. In this abridgement, anatomical and physiological details will be eliminated, and the number of technical concepts will be reduced. It will be interesting to see if Ruch's and Munn's "compacts" are as successful as their counterparts in the automotive field.

Another old pro back in a new uniform is Hilgard's new Third Edition. The publishers promise that Hilgard's basic character will be unchanged but that the new edition will be strengthened by up-dated materials and a greater emphasis on theory—including a new chapter on theories of personality. The

student guide will feature programed sections introducing basic words and ideas in the text.

Less venerable in years but old enough to be revised is the Sartain, North, Strange and Chapman text, *Psychology: Understanding Human Behavior.* This text stresses motivation and in accordance with current trends promises increased rigor and depth. Accompanying the revised edition will be a new teammate, Jas. Dyal's *Readings in Psychology,* a book intended as a supplement to the Sartain *et al* text.

—W. J. McK.

McKeachie deals above with introductory texts yet to come. *CP,* in April, hopes to deal with introductory texts recently arrived. D. C. Beardslee, at Michigan State's new Oakland campus, is laboring with the help of his local colleagues to produce a general review of all the new and revised introductory texts that became available in 1961. It is an enormous job, even when attacked by a group, but one that *CP* hopes will be valuable to all who are concerned with the introductory course.

—F. H. S.

A Tragedy of Errors

Frederick C. Thorne

Clinical Judgment: A Study of Clinical Errors. Brandon, Vt.: Journal of Clinical Psychology, 1961. Pp. xiv + 165. $6.00.

Reviewed by Roy M. Hamlin

Frederick C. Thorne, the author, is best known as long-time editor of the Journal of Clinical Psychology. *He took an experimental PhD at Columbia in 1934, where he was influenced by Woodworth and Lecky. In "reaction to the clinical sterility of rat psychology," he then acquired an MD degree at Cornell. He has long championed the practical and scientific importance of clinical approaches. His contributions to clinical psychology include his books on* Principles of Personality Counseling *(1950),* Principles of Psychological Examining *(1955),* Personality *(1961), and the present volume. In addition to his continuing editorial duties, he is engaged in private psychiatric practice. Much of his writing is done aboard his 27-foot cruiser floating around scenic parts of Lake Champlain. Roy M. Hamlin, a fellow graduate student of Thorne's was also influenced by Woodworth and Lecky. Following a brief sojourn in Sing Sing, he then progressed through a reformatory, a school for defectives, and a mental hospital to become a professor at the University of Pittsburgh's School of Medicine. Currently he is research psychologist at the VA Hospital, Danville, Illinois, and Professor of Psychology at the University of Illinois. His research on clinical judgment is covered in Thorne's book, and has led to current studies of symbolical behaviors in schizophrenia and aging. He reports himself, perhaps erroneously, as a virtuoso in the area of bad judgment.*

—F. H. S.

Dr. Thorne's latest book is full of errors and flagrant examples of bad judgment. How often does a reviewer have a chance to start off with a sentence like that? Thorne has collected 89 instances of mistakes in judgment by clinical psychologists. These realistic reports raise an interesting question: has research on clinical judgment ever studied clinical judgment?

Investigators of the clinical process have taken models from computer programming, from psychophysics, from single variable scaling, from standardized test validity. With such models, the general conclusion is clear. Pretending to be a computer, the clinician doesn't do well. As a calibrated scale, the clinician needs a calibrated scale. Asked to walk on imaginary stilts (with no stilts provided), the clinician falls on his nose. Research has studied *actuarial aids* to clinical judgment, not clinical judgment. Thorne's book, by contrast, takes an actual look at real life clinical judgment.

Research on clinical judgment has proved that the clinician has nothing to offer that a machine cannot do better. Experimental psychology comes to bury clinical judgment, not to praise it. Fringe benefits include burying clinical psychology and burying clinical research. In contrast, the most sophisticated advances in computer research seek avidly to devise programs that can even crudely imitate the astounding achievements of man's judgment: a chess machine that reviews only *plausible moves,* rather than every possible move; a Pandemonium machine that can take in the obvious and *fit it together;* a geometry machine showing meagre judgment-like capacity in solving problems. In studies of decision, creativity, and problem solving, the remarkable judgment capacities of man are accepted as fascinating processes for research analysis and development. Not so in research on clinical judgment: here the evidence stolidly accumulates to show that man *(homo clinicus)* can perform no judgment that machines cannot do better.

Thorne has made a distinct advance. His data clearly demonstrate that the clinician can make monstrous errors of which a machine would be completely incapable. No computer ever took another computer's wife for a ride at 2:30 A.M., in order to conduct psychotherapy. No machine ever invested money in an alcoholic psychopath's business venture as a result of countertransference. In Thorne's reports, man emerges once more as the human animal. No existing machine can compete with man's judgment.

The direct look at clinical judgment constitutes the most unique and important feature of the book. Thorne's objectives, however, are straightforward and essentially applied. He sets out to identify and analyze sources of error in

FREDERICK C. THORNE

case reports of clinical blunders. He holds that clinical medicine has developed *physical* diagnosis to high levels of efficiency, whereas *psychological* judgments are in a sorry state. Lack of tangible physical criteria, lack of "criticality" on the part of psychological clinicians, and neglect of "etiological equations" contribute to the sad situation. Pseudo judgments, communicating nothing, are all too common.

To achieve his purposes, the author employs a clinical approach. He attributes this approach in part to his combined training in psychology and in clinical medicine. He seeks "to get away from preconceived theories of what should be important and instead . . . to react primarily to the nature of each individual case including etiologic factors." That is, he has employed a phenomenological, clinical, or case approach in inspecting clinical error, much as he might study a series of patients with related medical disorders.

The book is a 'study' of clinical judgment based on data, but it is a critical essay rather than a model of rigorous research design and methodology. The quality of the case reports varies from poor to fair. The collection and analysis of data show little resemblance to the meticulous and systematic procedures followed by Flanagan in a Critical Incident study.

As a practical guide to the clinician, who makes judgments, the book is successful, and more useful in this respect than any other source. The direct look at the process of judgment is equally important. Is the clinician simply a poor substitute for a computer or for a regression equation? Often, for practical reasons, he does serve this function. That is, he performs roughly the actuarial processing of data already reduced or rendered artificial. He deals with material that could be punched into a card. At other times, he performs essentially different processes. He may deal with data that have been neither selected, categorized, or reduced. He may perceive data that a moment before were not perceptible. Some of these processes resemble problem solving or creative shift, restructuring of a perceptual field, spotting the pertinent and the non-pertinent in a context. As Thorne suggests, a therapist may make several hundred 'judgments' in the course of a few interviews. One wonders if the correctness of the single judgments, or the percentage of correct judgments, has much significance. The important criterion seems to be the degree to which each probing judgment contributes to a line of progress toward something that emerges as pertinent. Poincaré puzzled over this capacity of man, in considering creative thought. A fortunate absurd judgment may contribute more than a validly correct one. Thorne's look at actual cases, however, suggests that the clinician performs a considerable variety of other judgment processes. Thorne does not focus directly on drawing such distinctions and developing the research problems involved. Here may lie the ultimate contribution of the book: directing attention to the essence of various judgment processes, as distinct from research on actuarial aids to judgment.

Men go abroad to admire the heights of mountains, the mighty billows of the sea, the broad tides of rivers, the compass of the ocean, and the circuits of the stars, and pass themselves by.

—SAINT AUGUSTINE

Ames: More Ideas Than Words

Hadley Cantril (Ed.)

The Morning Notes of Adelbert Ames, Jr.; Including a Correspondence with John Dewey. New Brunswick, N. J.: Rutgers University Press. Pp. xii + 236. $6.00.

Reviewed by WILLIAM H. ITTELSON

Adelbert Ames, Jr., whose morning notes constitute the subject of the present book, for many years directed the Institute for Associated Research at Hanover, N. H. and is best known to psychologists through the Ames Demonstrations. Hadley Cantril, the editor, is the prolific and well known Social Psychologist, now with the Institute for International Social Research at Princeton, N. J. William Ittelson, the reviewer, now Chairman of the Psychology Department at Brooklyn College is a Princeton PhD who worked closely with Ames for a number of years and who still specializes in work on perception. His book, The Ames Demonstrations in Perception *appeared in 1952. His newest production,* Perceptual Changes in Psychopathology, *published by Rutgers University Press in 1961, will soon be reviewed in CP.*

—F. H. S.

THE work of Adelbert Ames, Jr. is far more widely known than is the man himself. The "Ames Demonstrations" are described in four of the most widely used introductory psychology texts while his name appears in only one of the four books—and that as a parenthetical reference in a picture caption. Ames belongs to the rare group of men who have made their influence felt not by their writings but rather by their teachings, through the medium of personal contact. With Ames, perhaps unique in this group, words came hard. Contact with him meant contact with the experimental phenomena and procedures which he developed and through which he primarily expressed himself.

NEW BOOKS FOR PSYCHOLOGY COURSES

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by ERNEST R. HILGARD, *Stanford University*

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Significant up-dating, a more integrated ordering of the material, a stronger emphasis on theory, and a functional use of two colors throughout the text highlight this new, thoroughly revised introduction to the principles and data of psychology.

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All illustrations used in the previous edition received careful scrutiny to ensure their close and current application to this text. As a result, a number of them have been retained; many new ones, added. The Student Guide has been fundamentally changed, with *programed* units now accounting for over half of the material. These units, thoroughly tested and revised, introduce a number of the key concepts and terms that the student will encounter in the text. A new Test Item File and an Instructor's Manual are in preparation. *The complete program of supplementary aids will be available for Fall use.*

Publication: April *679 pages,* *probable price: $7.50*

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BRUNO KLOPFER, *University of California, Los Angeles*
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THE PERSONAL WORLD:
An Introduction to the Study of Personality

HAROLD G. McCURDY, *University of North Carolina*

This recently published text explores the complex problem of personality from a number of intriguing viewpoints, determined mainly from the author's belief that many aspects of human experience are vital to the study of personality, regardless of whether or not they can be scientifically explained or measured. Among the range of topics placed under careful scrutiny are consciousness, the unconscious, post-Freudian developments, psychosomatics, imagination, and the power of heredity. As he examines and questions the various personality theories involved, Dr. McCurdy invites the student to do the same. The result is a thorough, often surprising and unconventional approach—provocative in orientation, content and style. With charts and photos. ". . . a clearly superior piece of work."—Robert W. White, *Harvard Univ. 591 pages, $7.50*

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The Morning Notes of Adelbert Ames, Jr., published five years posthumously, probably exceeds the total volume of his publications during his lifetime.

Ames' manner of working consisted of jotting down each morning the thoughts with which he had occupied himself the previous evening. These writings he himself called his "morning notes," and for long periods of time they represented almost his sole written productivity. For the most part, the notes were self-generated, although frequently the inspiration came from personal contacts with the many visitors who passed through Ames' laboratory. These unrecorded conversations, progenitors of the notes in this volume, are of course, lost. A single unique exception lies in the correspondence between Ames and John Dewey, in which the interplay of these two minds can nicely be seen, culminating for Ames in a number of morning notes which took the form of letters to Dewey and which comprise a special addendum to this volume.

THE present book offers the reader the unique opportunity of watching the original thought processes of a creative mind as they actually unfolded from day to day. With this in mind, the editor has wisely limited his task to that of selection, and while any selection must represent a personal bias, the words which do appear in this book are as put down by Ames himself. No one who had the opportunity of reading some of these notes in their original longhand form and of discussing them with Ames, can fail to be moved, both emotionally and intellectually, by this volume, as the intellectual ferment which Ames generated is once again experienced, and the individual search for meaning once again moves forward a few paces.

Perhaps this book will not have the same significance for the reader who has had no personal contacts with Ames against which to view it. These notes were meant to be the takeoff point for conversations in which tentative formulations and emerging ideas could be refined, elaborated or perhaps discarded. Ames himself was a complex mixture of simplicity and depth, of ignorance and knowledge and these words mirror that image.

In a favorite anecdote, Ames told of the acquaintance who, standing on one of his beloved New Hampshire hills and looking at a town in the valley below, turned to him and said, "I like to remind myself that there isn't a living soul down there who can't give me cards and spades and beat me at something." There is not a reader of this book, looking over the landscape of Ames' thoughts of more than a decade, who cannot derive therefrom some new knowledge, new understanding and new wisdom.

What These Magi Thought

R. Duncan Luce (Ed.)

Developments in Mathematical Psychology: Information, Learning, and Tracking. Glencoe, Ill.: Free Press, 1961. Pp. viii + 294. $7.50.

Reviewed by WILLIAM J. MCGILL

There are really three authors. Duncan Luce, who is also the editor, and whom this reviewer describes as "the best young mathematical psychologist in America," is now Professor of Psychology at the University of Pennsylvania. He is author with Howard Raiffa of Games and Decisions *(Wiley, 1957;* CP, *Sept. 1958,* **3,** *269-271) and alone of* Individual Choice Behavior *(Wiley, 1959;* CP, *April 1960,* **5,** *113-116). Robert R. Bush is also at the University of Pennsylvania and chairman of the newly organized Department of Psychology there. J. C. R. Licklider, after eight years at Harvard and seven at MIT, is now working with the psychology of communication and systems with Bolt, Beranek, and Newman in Cambridge, Mass. The reviewer, William J. McGill, is Professor of Psychology and chairman of the Department of Psychology at Columbia University. He is interested in many thing from stochastics to cats' inner ears, and has reviewed for* CP *Torgerson's* Theory and Methods of Scaling *(Wiley, 1958;* CP, *Aug. 1959,* **4,** *242f.) and Bush and Estes'* Studies in Mathematical Learning Theory *(Stanford Univ. Press, 1959;* CP, *Sept. 1960,* **5,** *284f.).*

—E. G. B.

IF there is anyone in this business who has never been vexed or downright frustrated by publication delays, let him consider the case of editor Duncan Luce and this collection of three topical essays on mathematical developments in psychology.

The writing is contributed by a splendid trio of experts: Luce himself, Robert R. Bush, and J. C. R. Licklider. Those who saw advance copies of the three manuscripts considered them to be the last word in some of the hottest areas in mathematical psychology. The work was sponsored by the Bureau of Applied Social Research at Columbia University, and, when the book was being put together, the Bureau's behavioral models project was a thriving example of cross disciplinary research on mathematical models in the behavioral sciences. But that was in 1956.

Luce was then at Columbia, Bush was at Harvard, and Licklider at M.I.T. All three have long since moved on. The behavioral models project is now practically defunct (as this reviewer has cause to know). Furthermore, much has happened recently to modify our perspectives on the mathematical topics considered in the book. Interest in information theory is diminishing. Statistical learning theory has developed far beyond the state reported in Bush's essay. Luce observes in his preface that the final revisions of the book were completed in 1957 but great delays were experienced in press. One can only guess at his thoughts while writing so gentle a reflection on the outcome of so much hard work.

Luce's essay is on information theory and its behavioral applications. The

reader is offered an exceptionally lucid exposition of the theory (the formal definition of channel capacity and Shannon's theorem), as well as an excellent rationale of the log-probability formulas. Luce then writes a review of the literature around attempts to measure redundancy in written languages, and around capacity effects in perceptual information processing. Like Attneave's recent book it selects a core of solid work out of the mass of *Anschauung* papers in information theory, and hence forms a useful guide to the literature before 1956. In fact, Luce's paper invites comparison with Attneave's book. The organization and style of presentation are about the same. The treatments are very nearly equal in length. Luce's mathematical level is a little higher. Attneave devotes more time to well conceived examples. Luce's treatment of the redundancy of language seems superior, especially since he includes a review of Mandelbrot's studies of Zipf's law. But the opportunity to illuminate this interesting conflict between efficiency and redundancy in the light of recent work on Zipf's law is denied Luce. Mandelbrot's important discovery (1954) that Zipf's law is a property of practically all random sequences (including tables of random numbers), a discovery that went unnoticed by most psychologists until 1957 when George Miller picked it up, came too late for inclusion in the manuscript and yet seems well known and visibly missing when the book appears.

Bush writes on mathematical learning theory. He reviews the early attempts of Thurstone and Hull, but his chief interest, of course, is with the statistical theories that sprang up after 1950.

There is an outline of the important mathematical properties of the statistical learning theories. Then Bush shows how the theories make contact with classical rubrics in research on learning. The picture of stimulus elements and linear operators organized under headings like *acquisition, extinction, generalization, discrimination, punishment,* and the like, is very stimulating—a bit like looking at a process-control chart of a giant industry. You can see at a glance where progress is being made and where things are not good. Acquisition, generalization, and discrimination (the latter thanks to Restle's work) seem to be doing pretty well, but Bush is unhappy in varying degrees with progress on extinction, motivation, and punishment. What a pity, in view of the enormous amount of recent work in mathematical learning theory, that this review carries the date 1955.

Bush's brief outline of the mathematical status of stochastic learning theory establishes the point that probability theorists view learning as a random walk with rather complicated rules. Hence, some of the most important advances in the theory were contributed by first-rate mathematicians whose interests were aroused by a psychological problem when psychology reached the point of being able to formulate the problem clearly. It is an object lesson in scientific progress. Bush maintains that the mathematical properties of the theory are (or were) "rather well understood." It is hard to square this statement with the avalanche of new results in the Bush-Estes book, *Studies in Mathematical Learning Theory,* based on work done in 1956-57. Perhaps the conflict merely indicates the relative isolation of levels of understanding. A theory whose properties are well known in a general way, usually surprises the man who asks for details.

Licklider's contribution to the book is a remarkable paper on linear models for manual tracking. Since the Second World War there has been great interest in the problem of incorporating human beings into systems of complex semi-automatic machines. For instance, "manned" rocket flights are being poohpoohed as stunts because the man comes along just for the ride and is never allowed to interfere with the operation of the machine. Whether or not these flights are stunts, the engineers' insistence on hands-off until preceptual-motor skills can do no harm, is hard to argue with. Machines are expensive, and the wrong move might ruin a good capsule.

The newest attempt to improve our knowledge of perceptual-motor skills is based on the type of mathematical analysis that is employed with periodic waveforms. The attempt originated with electrical, aeronautical, and servo engineers, and it is the obvious approach as seen by the engineer. All his machines receive complicated functions of time and then put out other complicated functions of time. He often has to try to deduce the nature of the machine by comparing its input with its output. Why not view the human attempting to stay on target as a complicated filter and noise-maker, and see what sort of machine emerges?

Licklider, in his characteristic way replete with startling visual images, develops the outlines of network analysis, and the conceptual apparatus used by engineers for deducing the type of mechanism inside the 'black box.' He then surveys experimental work on human manual tracking and leads the reader to an appreciation of what this literature has to say about the human transfer function. It is a unique and masterful presentation, showing that quantitative psychology has come of age.

The book provides a fascinating side glimpse of three very different quantitative writing styles. *Luce* delicate and deft: "The second procedure to arrive at H, which many feel to be both the simplest and most elegant, amounts to a rigorous formulation of the first one." *Bush,* head down and aiming at the breadbasket: "To a mathematician Hull's theory is rather barren. Hull did no mathematical analyses, he merely wrote down an exponential function to relate two variables." *Licklider,* an announcer creating word pictures for an unseeing audience: "It is as though the delta pulse were a sudden squirt of water from a faucet into a bucket . . . and the bucket had a leak. The level of the water rises step-wise when the faucet is opened, but then declines at a rate proportional to its height."

The last quote is vintage Licklider. Let us leave it at that. Comparing this book with a rare old wine does seem to cover all the essentials.

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A Glimpse of Animal Vision

R. H. Smythe

Animal Vision: What Animals See. Springfield, Ill.: Charles C Thomas, 1961. Pp. 250. $6.50.

Reviewed by MARSTON BATES

R. H. Smythe, as the reviewer points out, is a British veterinary surgeon and the author of a number of popular and semi-popular books about animals. Marston Bates is a zoologist, now at the University of Michigan, who has worked most extensively with mosquitoes, but still maintains a general interest in animal behavior. He too has taken a hand at producing books for the general public. CP *readers may know his* The Forest and the Sea.

—F. H. S.

It would seem that R. H. Smythe is a distinguished British veterinary surgeon who likes to write about animals: at least his book titles include *How Animals Talk*, *What Makes a Good Horse*, and *The Mind of a Dog*, as well as *Veterinary Ophthalmology*. This reviewer has not read any of these, but after going through *Animal Vision* one can imagine what they are like. The most apt way to characterize the present book is to say that it is 'very British.' There is, in England, a large population of people who are interested in animals; and a smaller population of people who write books for the larger group. The books range from the distinguished titles published by Collins in the *New Naturalist* series on down to the trivial and maudlin, with books like this by Smythe falling somewhere in between.

Symthe has divided his book into four chapters: "Why Animals See," "Kinds of Eyes," "How Animals See," and "What Animals See." He has packed into this a considerable amount of information about shapes and positions of eyes, eye anatomy, field of vision, acuity, color sense, shape of pupils, eye adaptations and the like. Almost always the author is concerned with vertebrate eyes—and dogs and horses understandably get a large share of attention. The author has a rather low opinion of insect vision, but he does take time to describe the compound eye; other invertebrates get only passing mention.

As far as this reviewer can tell, the anatomical and physiological statements about vision are accurate enough, but there are rather surprising general remarks on almost every page. "Animals are not supposed to think, but we must nevertheless not imagine that their brains are completely inactive . . ." Smythe also shows a curious lack of understanding of animal behavior in general. He notes, for instance, that "one of the chief differences between human beings and lower animals is that civilized man is always a member of a social group . . . A herd of deer may combine in resisting an enemy, but a flock of birds is united only in the matter of escape by means of flight . . ." His human psychology does not seem much better. In the course of discussing concealing coloration among animals, he remarks that "even among human beings one can trace a desire, handed down from primitive life countless ages ago, to adapt one's raiment to the surrounding landscape. In the country we choose to wear tweeds in greys and browns, or green and heather mixtures, to match the fields and the hedgerows."

The book, then, is a compendium of odd bits of information about vertebrate eyes. But the general attitude, the framework of knowledge, with which it is written is so curious—perhaps naive—that this reviewer hesitates to recommend it to the general reader, for whom it was presumably written; and the specialist in animal behavior will not need it.

Today we are faced with the preeminent fact that if civilization is to survive we must cultivate the science of human relationships, the ability of all people, of all kinds, to live together and work together, in the same world, at peace.

—FRANKLIN D. ROOSEVELT

Mathematical Models, Utility Theory, and Factor Analysis

Herbert Solomon (Ed.)

Mathematical Thinking in the Measurement of Behavior: Small Groups, Utility, Factor Analysis. Glencoe, Ill.: Free Press, 1961. Pp. 314. $7.50.

Reviewed by ANATOL RAPOPORT

Dr. Solomon, the editor of this volume, is a Stanford PhD in mathematical statistics. He worked for some years for the Office of Naval Research, and then became Professor of Education at Teachers College, Columbia. He is now Professor of Statistics at Stanford University and chairman of the Department of Statistics. He writes articles on models of group behavior, probability and statistics in the behavioral and engineering sciences, and similar subjects. Dr. Anatol Rapoport, the reviewer, is a mathematical biologist who came to the United States from Russia fifty years ago, obtained his PhD from the University of Chicago twenty years ago, continued at Chicago for a long time, and has now since 1955 been Professor of Mathematical Biology and Senior Research Mathematical Biologist at the University of Michigan's Mental Health Research Institute. He is the author of Science and the Goals of Man *(Harper, 1950),* Operational Philosophy *(Harper, 1953), and* Fights, Games, and Debates *(Univ. Michigan Press, 1960).*

—E. G. B.

THIS book is the second of three volumes which have grown out of the Behavioral Models Project, sponsored by the Office of Naval Research in 1952-1956. The present volume must, therefore, be viewed in perspective of the entire undertaking, namely, a systematic presentation of those portions of behavioral science which have become mathematicized.

The first volume of treatise dimensions, *Games and Decisions* by R. D. Luce and H. Raiffa, dealt with the topics indicated in its title; the third, *Developments in Mathematical Psychology,* edited by R. D. Luce, deals with mathematical learning theories, information theory, and some applications of cybernetics. The volume under review consists of surveys of three topics, the mathematical study of small groups (contributed by James S. Coleman), a survey of Bernoullian utility theory (by Ernest W. Adams), and a survey of mathematical models of factor analysis by the editor. The book appears, therefore, as a part of a much larger work, which has been undertaken piecemeal over several years and which, it is hoped, will be continued. If the present volume is self-contained, that is only because the various topics of mathematical behavioral science are still largely self-contained in the sense that it is still not important how the topics are grouped or in what order they are presented. The time for constructing an organic methodological edifice, like that of mathematical physics, has evidently not yet arrived. Still what has already been done is impressive and becomes increasingly so through the efforts of the contributors and of the editors compiling books of this sort.

COLEMAN, the contributor of Part I, views the mathematical models of small groups as falling into several distinct categories. Some represent attempts to isolate certain "variables," characterizing small group behavior and to indicate quantitative or semi-quantitative relations among them. Such are the models of Homans and Festinger, and their mathematical interpretations by Simon and Guetzkow. The indications of such relations may be "weak" or "strong." Weak indications may be no more than statements about which variables depend on which or, a step further, statements in the form "the more . . . the more . . ." or "the more . . . the less . . ." While such assumptions do not provide much opportunity for mathematical manipulation, logical and semimathematical deduction can be used to obtain consequences of assumptions not immediately apparent. The "variables" which form the building blocks of these models have been traditionally those isolated by social psychologists, studying small group behavior. These variables carry intuitive meaning (at least to small-group psychologists), e.g., "amount of interaction," "level of friendliness," "level of activity," etc. For obvious reasons they present, however, formidable problems of measurement, problems which become aggravated to the extent that actual mathematical machinery (e.g., differential equations) is proposed to deal with them.

The problem of measurement becomes simplified in another class of small-group models, namely, interaction models. Here one classifies certain acts identifiable in principle, e.g., utterances classifiable into distinct categories. The group-process becomes then a sequence of events reconstructable from a protocol. The interaction models are based on assumptions governing the dynamics of such interactions (as in the work of Bales, Stephan, Mischler). The mathematical machinery here is that of probability theory and of stochastic processes.

A third class of models includes those in which binary relations between pairs of group-members are studied. These relations may be constant, in which case the model is a purely structural one, indicating the theory of graphs or matrix theory as the appropriate mathematical tools; or the changes in these relations in time may be the focus of interest, leading to dynamic models

(e.g., Markov chains). Approaches of this sort are found in the work of Harary, Katz, Luce, Perry, Landau, Leeman, Shimbel, and others.

Finally there are models of group-action, in which structural and dynamic considerations enter as determinants, e.g., group-learning theory (Hays and Bush), and group-performance as a function of the communication net (Bavelas). The more recent researches of Burke, Atkinson, and Suppes have not been included in Coleman's survey.

PART II concerns utility theory, particularly Bernoullian utility theory, in which the "expected utility" of an alternative is estimated by the product of its intrinsic "utility" and the probability of its occurrence. This approach to utility as a normative determinant of decisions has been revived in recent years after long neglect by economists and psychologists. The reason for the neglect had been the conviction of the impossibility of measuring utility on anything stronger than an ordinal scale, and thus the impossibility of assigning numerical values to alternatives. The occasion for the revival of the concept of "expected utility" has been the operational definition of an interval utility scale by von Neumann and Morgenstern on the basis of choices between risky outcomes. While the question of the "reality" of utility as a psychological or economic determinant has by no means been settled by this theoretical innovation, research in this area has flowered and now forms an important portion of mathematical psychology.

Ernest W. Adams, the contributor of Part II, has ably summarized the principal theoretical problems related to utility theory, has described some of the relevant empirical studies, and has compiled a representative bibliography for the student who would pursue the study of this subject. Adams has also brought out the formidable difficulties and subtleties inherent in utility theory, which speak for the fecundity of the underlying ideas.

PART III, the shortest, is a historical survey of the ideas underlying factor analysis. Herbert Solomon begins with Spearman's attempt in 1904 to establish a General Factor of mental ability and carries the development of factor analysis through the ideas of Thomson, Guttman, Holtzinger, Thurstone, and Hotelling.

Factor analysis is a vast subject and its technicians constitute almost a subprofession among the practitioners of statistical methods. For the acquisition of technical competence, the student of behavioral science will, of course, turn to any of the excellent existing treatises of the subject. Within a survey of mathematical methods in behavioral science, however, brief as it is, the historical account chosen by Solomon is, perhaps, the most appropriate treatment. The sequential cumulative development of the discipline is most clearly apparent in an exposition of this sort, which pictures the consolidation of a method as basically a maturation process. There is hardly a more direct way to encourage the grasp of the essence of a method than by following a recapitulation of its evolution.

Mathematical Thinking in the Measurement of Behavior should be a welcome addition to the growing library of the mathematically oriented behavioral scientist.

Sixth Man Falls Short?

Jess Stearn

The Sixth Man. New York: Doubleday & Company, Inc., 1961. Pp. 286. $3.95.

Reviewed by EVELYN HOOKER

Jess Stearn, associate editor of Newsweek, *was formerly a feature writer for the* New York Daily News *and has produced two earlier books:* Sisters of the Night *and* The Wasted Years. *Evelyn Hooker, now a research associate in psychology at UCLA, studied with Muenzinger at Colorado and with Dunlap at Johns Hopkins. After World War II she moved over into clinical psychology and, by accident of having a male homosexual student who urged and facilitated research on the problem, has been studying homosexuality ever since. Two books on homosexuality in males will eventuate from her last six years of research on the matter.*

—F. H. S.

WITH the publication of the Kinsey volumes in this country and the Wolfenden report in England, no informed person can dispute the fact that homosexuality must be viewed as a social phenomenon of considerable magnitude. Exactly what that magnitude is, and whether it is increasing, are highly controversial issues which will not be settled by *The Sixth Man.* "Surveys by homosexual groups," "statistics compiled by many health officials and doctors," and Stearn's subjective belief will not convince the scientist who is aware of the many difficult problems in obtaining an adequate sample of a socially ostracized and legally penalized group.

Nor will the statement that this book is the result of "two years of exhaustive research" persuade the reflective, even though uninformed, reader that anything more than the surface of the problem has been scratched. An informed and enlightened public opinion about homosexuality is essential to the formulation of wise public policy concerning the complex issues of prevention, treatment, or legal status. It is difficult to see how a superficial account of the sensational aspects of the problem will help, except perhaps to persuade its readers that the problem cannot be ignored. A more soberly reflective description of the homosexual 'community' or 'world' has been available for ten years in Cory's *The Homosexual in America.* Unfortunately, the scientific research literature on that community (as distinguished from clinical studies of individuals) is represented by a single article by Leznoff and Westley *(Soc. Probl.* 1956, **3**, 257-263).

What is needed is research by social scientists who will be courageous enough to venture into such a tabu area; who will (as a group) be equipped with clinical wisdom and knowledge of social processes and group behavior; who will

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be prepared to have current theories challenged by data obtained from members of the homosexual community who are able to manage a viable existence, as well as from those who are neuropsychiatric casualties. Although there are scattered individual efforts, this reviewer knows of no evidence that such a comprehensive research program is likely to begin in the near future. *The Sixth Man* is ample evidence, if evidence is needed, that both society and the individuals affected will continue to pay a high price for the failure to meet this scientific challenge.

Treating Faint Workers

George Strauss and Leonard Sayles

Personnel: The Human Problems of Management. Englewood Cliffs, New Jersey: Prentice-Hall. Pp. xvii + 750. $7.50.

Reviewed by ARTHUR BRAYFIELD

Both authors are economists with degrees from MIT, with extensive bibliographies and with an interest in personnel management and human relations in industry. Leonard Sayles is now professor of management at Columbia University and George Strauss is professor of industrial relations at the University of Buffalo. The review further identifies each of them. Arthur Brayfield, in preparing himself to write this review, worked during the depressed thirties in the California oil refineries, attended Antioch College with an eye to becoming a labor leader, took a PhD degree with Donald Paterson at Minnesota, taught at Minnesota of Minneapolis and at California of Berkeley, chaired the psychology department at Kansas State for some years and then moved his chairing to the Pennsylvania State University, where he regards himself as possessing some job satisfaction while pursuing research upon it. Academic administration seems to him, however, neither as clean nor as remunerative as work with oil. In 1957-58 he held a NSF Faculty Fellowship while working on bio-technology in the UCLA School of Engineering.

—F. H. S.

THIS textbook for students of business administration represents a wedding of 'human relations in industry' to more conventional substantive materials on personnel administration. It features interdisciplinary concepts and findings from the behavioral sciences "in the context of management's human-relations problems."

The authors are widely published economists who shared experiences at MIT and Cornell. Their approach to managerial problems reflects these early influences. Strauss is Professor of Industrial Relations at Buffalo and Sayles is Professor of Management at Columbia.

Much of the literature on human relations appalls psychologists. This offering will probably be seen as a notable exception; it is restrained, sensible, and informed. Taken on its own terms, it is excellent.

As an interdisciplinary venture, the book holds a mirror, though of narrow dimensions, to psychology. The psychology one sees here is largely Lewinian (via Douglas McGregor) with trimmings from the Michigan Survey Research Center and an added dash of Norman Maier group participation (Sayles was at Michigan during 1952-1956). A somewhat selective industrial social psychology is portrayed; important aspects of personnel psychology get limited attention. Engineering psychology commands two paragraphs. Some learning principles are included but the powerful notion of the 'shaping' of behavior is not explicitly treated.

A charming inconsistency suggests the book's orientation. On page 447, we learn that "the generally low level of reliability of most measures of employee performance seriously limit attempts to assess a testing program." But on pages 138-139, the authors do not qualify the results of a G. E. study on supervisory behavior although the conclusions rest on the reliability (and validity) of certain performance measures. The hoary but crucial criterion problem does not overly plague the slim discussion of the demonstrated effectiveness of human relations practices.

PERSONNEL is directed primarily to the means for amelioration of the occupational behavior that Montaigne once strikingly characterized—"They go but faintly to work, as they say, with one buttock."

Motivation, then, is the major concern. Need satisfaction, in an uncomplicated version, is invoked as the key concept. There is extended reference, especially in the early chapters, to job satisfaction, although it is not clear whether the interest is in job satisfaction as dependent, independent, or moderator variable. Subsequently, it becomes apparent that performance variables are the dependent ones of prime concern.

Although there is sporadic recognition of the attenuated relationship between job satisfaction and performance, the authors do not explore adequately the implications for both motivational theory and managerial strategies and tactics. Possibly this impression is conveyed because the discussion is not concentrated in one place.

The authors are unable to escape the basic quandary of the human relations approach but at least they are clear in stating it. Early (pp. 1-2), they say, "The central problem of personnel administration is to induce a group of people—each with his individual needs and personality—to work together for the objectives of the organization. How can this be done? Only through convincing them that by doing the job they can satisfy their own needs." Again, near the end (p. 733), as they take exception to oversimplified versions of human relations: "Human relations is not an end in itself. The purpose of business is not to make people happy (though some have argued otherwise) but to achieve its over-all goals of productivity and profitability. And the purpose of *human relations* is to help management elicit the cooperation of people in working toward those goals."

The late Karl Muenzinger had an interesting classification of motives into *needs* and *impositions (Psychology: The Science of Behavior,* 1942). He defined the latter as "a motive which is imposed upon a subject readymade by

another agent in the situation." This distinction might provide a useful orientation to the study of occupational behavior. The human relations approach is based largely on need theory assumptions. Yet the fundamental reality of the employee-employer relationship is the imposition of the organization's goals and objectives upon the employee. Workers soon learn that the reality factor, when the chips are down, will override the human relations considerations.

Thus the book is somewhat incomplete in that it does not take adequate account of the likely prospect that there may be a fundamental conflict between the real or perceived interests of management and labor, does not really consider the basic questions of power distribution and availability, and does not sufficiently emphasize that 'accommodation' may be the limited but more realistic goal of personnel administration. The authors are not unaware of the limitations and dilemmas of the human relations approach; they include excellent chapters on discipline and on the supervisor's use of authority and, indeed, devote the final chapter to wriggling on the hook.

Rock-ribbed Psychometrics in the Ninth Grade

Starke R. Hathaway and **Elio D. Monachesi**

An Atlas of Juvenile MMPI Profiles. Minneapolis: University of Minnesota Press, 1961. Pp. xviii + 402. $8.00.

Reviewed by ALFRED B. HEILBRUN, JR.

The team of Hathaway and Monachesi is already known to psychologists through the earlier joint book Analyzing and Predicting Juvenile Delinquency with the MMPI *(1953). Dr. Hathaway's other noteworthy collaborative efforts have included that with Chauncey McKinley in producing the MMPI and that with Paul Meehl on* An Atlas for the Clinical Use of the MMPI *(1951). He also has a full existence, of course, while not engaged in collaborative research and writing, as professor and as director of the clinical psychology program in the Department of Psychiatry and Neurology at the University of Minnesota Medical School. Dr. Monachesi is a distinguished sociologist and is chairman of the Department of Sociology at Minnesota. The reviewer, Dr. Heilbrun, a product of the State University of Iowa, describes himself as having attempted to apply some of the "hardnosed" tradition of that Department of Psychology to the problems of personality assessment. Although much of his research has been directed towards clarifying the sources of error in test prediction, he has maintained an applied research interest in such things as the diagnosis of brain damage, the counseling process, and the prediction of academic adjustment.*

—F. H. S.

WITH the *Atlas of Juvenile MMPI Profiles,* Hathaway and Monachesi have provided another example of Minnesota's rockbound psychometrics tradition which already can boast of the most widely used objective personality test (the MMPI) and the earlier *An Atlas for the Clinical Use of the MMPI.* These writers have developed a new system of classifying adolescents, and the *Juvenile Atlas* must succeed or fail depending on how useful the system turns out to be.

In brief, 11,000 Minnesota ninth grade boys and girls were given the MMPI and about three years later the collection of data required for case histories of these pupils was initiated by trained field workers. These data included the personal observations of those who knew the children plus additional test and demographic information. Hathaway and Monachesi then selected boy and girl representatives for each high two-point code that occurred among the ten clinical scales of the MMPI, over 1000 in all. This formed the basis for classification as, for example, the 9-4 code (highest on Hypomania scale, second highest on Psychopathic Deviate scale) case histories for boys would represent descriptions of persons who have the common characteristics of being boys, adolescents, ninth graders, and relative 9-4 high points on the MMPI. The usefulness of the system is plainly dependent upon whether the user of the *Juvenile Atlas,* once having found the case history descriptions appropriate to the high-point class in which he is interested, can generate valid statements about the case in question. In this regard, two serious issues merit comment.

For one, Hathaway and Monachesi deliberately avoided culling out common features associated with membership in the various adolescent classes, leaving the user the task of scanning multiple case histories in search of some common interpretable feature of the code-type in question. Since the case histories for the same code-type class are often quite variable, this provides a temptation for certain users to "shop around" until a case history is found which fits his *a priori* convictions. This reviewer would have preferred the safer guidelines of having Hathaway and Monachesi, as experts, assume the responsibility for deducing lawful relationships between class membership and other variables using their basic pool of 11,000 cases.

The second issue has to do with the reliability of the MMPI high-point codes for adolescents. Hathaway and Monachesi acknowledged the "rapid shifts in personality" which occur in adolescence and the resultant limitation of validity. However, one finds that in only about five per cent of the over 600 reported cases who were retested three years later was the adolescent a member of the same two-point code class. Elusive class membership remains an interpretive headache for the *Juvenile Atlas* user.

Criticism is easy, acomplishment difficult; this brief review has given short shrift to the conscientious work that has gone into this book. I have no doubt that, used cautiously as Hathaway and Monachesi advise, the *Juvenile Atlas* will be of considerable assistance to those interested in the behavior of adolescents. Someday a better adolescent cookbook may appear but, if so, it will probably have its inception in Minneapolis.

Macmillan Texts Lead The Way In Applying The Tools of Science to Exploring The Individual

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By William S. Ray, The Woman's College of the University of North Carolina

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By William U. Snyder, The Pennsylvania State University

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By Anne Anastasi, Fordham University

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PSYCHOLOGICAL TESTING, *Second Edition*

By Anne Anastasi

This authoritative work on psychological testing is designed to train students in the techniques of evaluating tests, interpreting test results, and keeping pace with developments in relevant theory and research. The second edition includes much important new material, including a completely up-to-date survey of tests and coverage of new testing concepts and methodologies. "A useful, critical, up-to-date summary for everyone interested in any type of psychological tests . . . invaluable for those interested in obtaining more information about the tests, using the tests, or in research on tests." — *Personnel Journal* $7.50

THE PSYCHOLOGY OF ADOLESCENCE

By Arthur T. Jersild, Columbia University Teachers College

A three-fold approach characterizes this classic work in the field of adolescent psychology: *objective* emphasis on scientific study of characteristics and behavior; *developmental* study of the relationships among childhood, adolescene, and adulthood; and orientation toward the concept of the *self*. This book differs from most others in its field because it consistently relates the study of adolescent psychology to all facets of human development. "Has combined . . . the philosophy underlying mental health advancement with the unique psychology needed in working with the adolescent . . . an addition of worth to our study of adolescence." — *Mental Hygiene* $5.75

PERSONAL ADJUSTMENT. An Approach Through the Study of Healthy Personality

By Sidney M. Jourard, University of Florida

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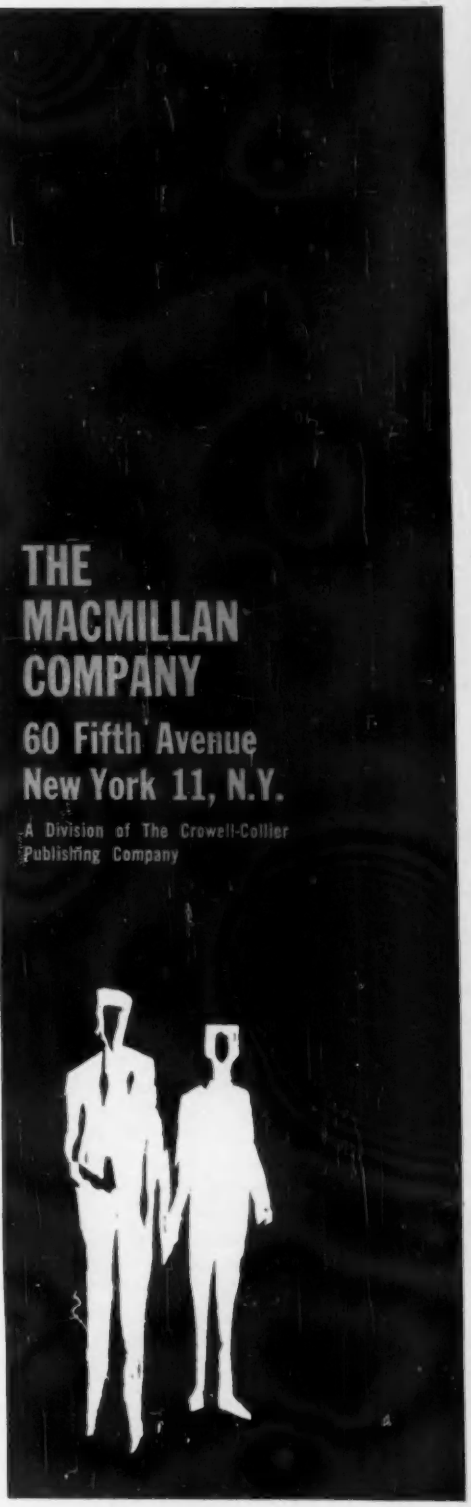
— *Contemporary Psychology* $5.75



Clinical Psychology: Potluck

Lawrence E. Abt and Bernard F. Riess (Eds.)

Progress in Clinical Psychology. Vol. IV. New York: Grune & Stratton, 1960. Pp. x + 181. $6.75.

Reviewed by LEE SECHREST

The editors are both in private practice in New York City and associated with the Postgraduate Center for Psychotherapy there, where Riess is Director of Research. Reiss, the senior, edited Projective Psychology *with Leopold Bellak (Knopf, 1950) and with Daniel Brower the first three volumes of the present series. The reviewer, Sechrest, is Assistant Professor of Psychology at Northwestern University, a clinical psychologist who studied at Ohio State University under George Kelly and Julian Rotter. He reviewed Schneider's* Clinical Psychopathology (CP, *Mar. 1961,* **6,** *69f.).*

—E. G. B.

A WELL known recipe for rabbit stew begins logically with. "First, you catches the rabbit." Similarly it would seem wise for the compilers of any literary stew first to decide upon and then to obtain the 'meat' necessary to give an otherwise thin soup body and consistent flavor. The fourth volume in the series of works outlining developments in clinical psychology does not lack for staples or seasoning. What it does lack is a unifying theme or, as Henry P. Davis suggested in his review of Vol. II *(CP,* Jan 1957, **2,** 18f.), an "integration of theories, practices, and trends." Unlike the previous three volumes the present one does not even contain the usual complement of articles on various clinical techniques of diagnosis and therapy. Nor are there any articles on professional aspects and problems of clinical psychology. Admittedly some of these expected contributions may not be missed.

Volume IV in this series sees Bernard F. Reiss replacing Daniel Brower as co-editor with Lawrence E. Abt. Drs. Abt and Reiss are both clinical psychologists in private practice and Dr. Reiss is, in addition, director of research at the Postgraduate Center for Psychotherapy in New York City. Their stated purpose of the current volume in the series is "to bring up to date . . . developments in clinical psychology that represent progress in the movement of the field in the direction of a genuine science of the application of the clinical method to psychology." In contrast to earlier volumes, however, the organization of the present one is "around topical issues rather than in terms of the more usual categories of research foundations, diagnosis, and psychotherapy." It is difficult to discern the motives and circumstances which led to the particular selection of topical issues to be explicated. Some—psychoanalysis and literature for example—have a relationship to scientific progress in clinical psychology that attenuates the meaning of *science* rather drastically. Other topics represent about the same kinds of reviews that were found in previous volumes and which appear in a variety of other sources. And, whether they are better or worse for it, still other contributions have a relevance for the practices of clinical psychology that is about as great as for the general run of articles appearing in the *Psychological Bulletin.* Several of the articles can scarcely be said to represent contributions uniquely available in this series, for they have appeared in no more than slightly revised form in other places. For example Gregory Razran's contribution on the observable unconscious in Soviet Psychology has recently appeared in a longer and far more useful form in *Psychological Review.* To be sure, his *Review* paper does not contain his few remarks on the relevance of interoceptive conditioning for the Freudian conception of the unconscious, but then the necessity of referring his most interesting chapter to Freudian psychology is doubtful, and, in any case, may not contribute much to the justification for purchasing the book. In some important respects then, the current volume of *Progress in Clinical Psychology* resembles greatly a standard book of 'readings' rather than an integrated, well-organized survey of a field.

As usual in a book of this nature, Volume IV contains articles at very different levels of quality, generality, and interest. There are several articles quite deserving of the reader's careful attention and thought. As already suggested, Razran's article is exceptionally interesting and points to an area of research that is of potentially vital significance to personality theorists and clinical phychologists, but one which is thus far largely neglected in American psychology. R. S. Lazarus and William Riess present a brief but cogent discussion of stress and adaptation that will be of interest to clinical researchers.

The real spice of the present volume may arise from its presentation in close proximity of articles by Hans Eysenck, Carl Rogers, and Hobart Mowrer. A combination like that is guaranteed to attract interest. All three authors, moreover, have something of great importance to say. While none of the three contributions is quite new from these writers, all are of recent origin and all have vast implications for current practices of clinical psychologists. Whether one agrees with their orientations or not, not one of the three can be neglected or passed over superficially, and no one needs to be told that Eysenck is controversial. Clinical psychologists *may* on the other hand, need to be told that his arguments are powerful and that they must be taken seriously. Eysenck insists once again that the diagnostic and therapeutic practices of clinical psychology resemble superstitions more than science. He makes some specific and testable proposals for the reorientation of much of clinical psychology. Moreover, he presents data to support at least a part of his reasoning. However equivocal some of the support may be, it

would be of interest to see data for other positions compared with it.

While Rogers and Mowrer have been more fortunate in obtaining respectful audience among clinical psychologists, they, too, have been and are polemists who should be read thoughtfully by those who would dispose of their arguments—read *before* they are disposed of. In his article Rogers presents the basis for a developing reorientation of so-called client-centered therapy in a direction away from adherence to specific nondirective techniques and in the direction of extreme reliance on the therapeutic relationship of "unconditional positive regard." Mowrer continues his attempts to detail the inadequacies inherent in viewing personal responsibility and guilt as objects to be exorcised by psychotherapy.

While Volume IV of *Progress in Clinical Psychology* may not be more than a set of pieces of varying interest relevant to clinical psychology, the best of them should provide stimulation for thoughtful readers. This reviewer reiterates the hopes of previous reviewers that future volumes in the series will find an integrating theme that reveals the general progress of scientific clinical psychology.

Psychiatric Cases at Harvard

Graham Blaine, Jr. and **Charles C. McArthur**

Emotional Problems of the Student. New York: Appleton-Century-Crofts, 1961. Pp. xviii + 254. $4.95.

Reviewed by FRED MCKINNEY

Both editors of the present volume are deeply involved with the emotional problems of students at Harvard. Graham B. Blaine, Jr. is psychiatrist to the University Health Services there and also Associate Psychiatrist to the Adolescent Unit of the Children's Medical Center in Boston. He formerly was a consultant psychiatrist to Williams College. Charles C. McArthur is a psychologist also in the University Health Services at Harvard, and is a member of the faculty of the Department of Social Relations there. Sometimes he lectures at the Graduate School of Education, across campus. He also finds time to serve as psychologist in the Alcoholic Clinic of the Peter Bent Brigham Hospital. The reviewer, Fred McKinney, has also been involved, long and deeply, in the inner lives of students. For seventeen years he has worked in the Student Health Service of the University of Missouri. In 1940 he published the Psychology of Personal Adjustment *and in 1958* Counseling for Personal Adjustment in Schools and Colleges. *He is noted for his work in educational TV, as it combines with adjustment, having produced thirteen kinescoped productions on personal adjustment and thirteen additional ones in a series called* Time to Think. *Off campus, he has served as president of APA Division 2 and as chairman of the Conference of State Psychological Associations.*

—F. H. S.

THIS book is a collection of articles written by present or former Harvard staff members who describe the *psychiatric* problems of students and the manner in which they are treated by a University Health Service. It is ". . . presented partly as an answer to the frequently asked question 'Why does a college need a psychiatrist?'" The book is not intended, then, as an interdisciplinary or broad discussion of the "Emotional Problems of the Student," but rather as a series of expositions on students as patients of a medical staff. As such, it is a good book.

By means of approximately 70 thumbnail sketches and short but insightful cases, plus some statistical analyses, the authors reveal the nature of the mild and serious emotional disturbances of the collegian. There is merit in Dr. Dana Farnsworth's discussion of how psychiatrists (and certain psychologists and sociologists too, for that matter) might be used as consultants to personnel officials and university committees. One welcomes his suggestion that there be a careful examination of the view of the college official who defines his relationship to the student as *in loco parentis*—a position that some universities today aggressively assume.

The book begins on an excellent note with the introduction by Erik H. Erickson, who furnishes a scholarly, interdisciplinary, and process-oriented framework. The fact that not all of the other chapters fit into this framework indicates that psychiatry, even in a first rate university, needs to develop more firmly in these directions. It should be noted that one of the editors, a psychologist, is an equal partner—a situation unlike that reflected in a similar but less dynamic book by Fry and Rostow (*Mental Health in College,* New York: Commonwealth Fund) published in 1942. The close cooperation between this psychologist and the staff, which is indicated in his chapter, shows specific progress in interdisciplinary relations.

The reviewer regrets, however, that McArthur did not assert his prerogative as co-editor and urge other contributors to follow the style used by himself, Erickson, and also Walters (who wrote the chapter, "Student Apathy"), which would place each contribution in the context of the periodical literature of the syndrome discussed. There is no bibliography, and authors are mentioned in the preface with no documentation. Reference to the literature is sorely needed in the final and special chapter on therapy in view of the extensive empirically oriented literature in the field today, and the fact that therapy is discussed throughout the book.

The editors have organized the contributions around both syndromes (character disorders, homosexuality, psychoses, suicide, apathy) and classifications of students (women, graduate students, and students in other colleges such as business and medicine). Dr. McArthur shows the broad and rich technical service the clinical psychologist can perform in a health service. The discussion of study problems lacks this broad perspective. More data, for example, should be presented to support such a statement as, "studying is often equated with aggressiveness." The claim that inability to learn a foreign language is usually related to family history also requires specific support if it

is to earn the reader's respect.

The book does show the student psychiatrically, but much of the material does not communicate at the level at which the present most interested educator is receptive.

Yanqui Educational Psychology in Spanish

Efraín Sánchez Hidalgo

Psicología Educativa. (2nd rev. ed.) Rio Piedras: Ediciones de la Universidad de Puerto Rico, 1959. Pp. 718.

Reviewed by H. T. Manuel

The author, Dr. Sánchez Hidalgo, is a native Puerto Rican who did graduate work in educational and social psychology at Columbia University, and who until recently was Secretary of Education in the Commonwealth of Puerto Rico. He now is professor of education at his alma mater, the University of Puerto Rico. Dr. Herschel Manuel, since 1925 an educational psychologist at the University of Texas and for many years the director there of the Testing and Guidance Bureau, has been a long-time specialist in problems of educational and psychological measurement as well as a general scholar in his field. He is now actively involved in a research project concerned with the preparation and evaluation of inter-language (English and Spanish) testing materials. His interest in testing goes back at least to 1918 when he, along with such people as Boring, Dallenbach, Hunter, Yerkes, Anderson, and others, serving as psychologists and members of the Army's Sanitary Corps, gathered at Camp Greenleaf, Georgia, where all were more or less indoctrinated by the Army and all thereby prepared to forward the work on the program of intelligence testing in World War I. (Photographic evidence bearing on the latter sentence can be found in Vol. XV of the Memoirs of the National Academy of Science and, framed, on the wall of E. G. Boring's office in Cambridge, Mass.)

—F. H. S.

Psicología Educativa was first published in 1954. The present revised edition follows closely the original text with generally minor changes by deletion and addition. Later references have been added to the readings. In the preface to the first edition Professor Alfredo Silva describes the work as a textbook written expressly to satisfy the professional needs of the first-year "normalista" (a student preparing directly for teaching), the third-year college student of education, and teachers in service. He further characterizes the work as scientific rather than philosophical. Reflecting the author's graduate study at Columbia University, the references in the book are primarily to North American publications.

Many writers have tried their hand at writing a textbook in educational psychology. Thorndike was a pioneer in 1903. The topics of his major interest are suggested by the titles of his 1913-14 three-volume work, *Original Nature of Man, Psychology of Learning,* and *Mental Work and Fatigue and Individual Differences and Their Causes.* In the intervening years the field of study has widened enormously with the addition of material relating to personality, mental hygiene, group processes, human development, social class, and the like. The 1942 *Educational Psychology* by Gates and others lists 15 titles of general texts published between 1935 and 1940. In the last decade there has been a veritable rash of new books differing widely in point of view, organization, and style. *Psicología Educativa* is one of a relatively few in Spanish.

The author of a textbook in educational psychology has a tough assignment; the product must be good psychology, and it must be related in some way to education. The wealth of material is itself baffling. Professor Sánchez Hidalgo accepts learning as the criterion of selection: "Educational psychology," he says, "is the study of that behavior which results in learning . . ." But this does not solve the problem, the material which can be related in some way to learning is almost boundless. Besides, there is the problem of differentiating educational psychology from general psychology. Educational psychologists have stoutly insisted that their field has a certain autonomy, that it is not merely the application of principles established in general psychology. Gates expressed that point of view as early as 1942 in the revision of his earlier textbook.

The superabundance of material is not the only problem facing the textbook writer. Perhaps more frightening is the fact that he must write for students who approach the text with very different backgrounds in general psychology, mathematics, biology, and related fields. He has an impossible task; if he succeeds with one group, he fails with another.

The organization of material is a major problem. Shall the materials be presented as they might appear in a logical subject-matter outline, or shall they be organized around the activities and problems of the teacher? The first, the traditional organization, is that of *Psicología Educativa,* which follows the general outline (here much abbreviated)—definition of field; history and methods of psychology; development (physical, motor, etc.); personality and mental hygiene; learning (theories, characteristics, types, evaluation, etc.).

The major significance of the book is in the fact that it makes available to the Spanish speaking student a carefully prepared summary of much of the material and point of view of educational psychology as the subject has developed

in this country. The treatment of so large a body of material is somewhat encyclopedic, but the author has made the book a better learning instrument by including readings, questions and topics for discussion, suggestions of learning activities, and in some cases films which may supplement the text.

The book is far ahead of any other Spanish language textbook in educational psychology which the reviewer has seen. If given an opportunity, it will undoubtedly stimulate the scientific study of psychology and education in Spanish speaking countries in which these fields are less well developed. The author should be encouraged to continue his writing in this area.

In the United States the book will be of interest to the increasing number of psychologists and educators who wish to cooperate with their colleagues in other countries. It will have a special appeal for English speaking students of psychology and education who need to improve their Spanish language skills. Knowing an English version of the facts and principles discussed will facilitiate reading them in another language.

Two Audiences, both Missed?

Herschel Alt

Residential Treatment for the Disturbed Child: Basic Principles in Planning and Design of Programs and Facilities. New York: International Universities Press, 1961. Pp. xix + 437. $7.50.

Reviewed by ROBERT W. MOULTON

Herschel Alt is identified in the following review. Earlier he wrote Forging Tools for Mental Health. *Robert Moulton, now Assistant Professor of Education at the University of California at Berkeley, took his doctoral work at the University of Michigan and was kept there as an instructor and as a practitioner in the University Counseling Division until he saw the greener fields of Texas. He was at the University of Texas until the brown hills of the Bay Area seemed yet greener. While at Texas, in addition to his teaching and research in the clinical area, he served as consultant and therapist at the Brown Schools for Exceptional Children, there gaining intricate and first hand experience with the problems dealt with in Dr. Alt's book.*

—F. H. S.

HERSCHEL Alt is Executive Director of the Jewish Board of Guardians and is a well-known contributor to the literature on the treatment of disturbed children. He has long been active in building the program of the Hawthorne Cedar Knolls School, and during his tenure the school evolved from a traditional training school to a therapeutically oriented residential facility dealing with children with a wide variety of psychopathology.

Alt estimates that over 100,000 emotionally disturbed children are currently receiving care in some sort of residential setting. The need, he feels, is enormous for expansion and improvement of these services as well as for a clarification of the nature of their optimum organizational and physical structure. In this book, he attempts to present a summation of the lessons he has learned in over twenty years of directing the development and functioning of such a facility and the related wisdom he has garnered in his work as a mental health consultant outside of the residential treatment setting.

According to the author, this work was written primarily for laymen who are concerned with residential treatment, such as members of groups sponsoring residential treatment programs, or those who are involved in the formulation of general policy with regard to this activity. It impresses this reviewer that such readers may find it difficult to sustain an interest in this work because they will become bogged down in a plenitude of details and in allusions to technical therapeutic matters beyond their competence. Thus, wheat-from-chaff problems are created and the reading of this book may not contribute as substantially to increasing the wisdom of decisions as the author might have wished. This difficulty, I believe, can be traced to the author's attempt to reach, simultaneously, two audiences. His second audience is the clinician directly concerned with the treatment process.

THE clinician will find discussions of many of the problems with which he is constantly confronted. Alt deals, for example, with the difficulties of establishing a therapeutic milieu which provides optimum conditions for children with a variety of pathologies. Often the antisocial delinquent who may need firm and constant control must be managed in the same setting with the relatively inhibited and fragile neurotic who requires an opportunity for free expression of impulses. He points out the difficulty of maintaining the traditional neutral role of the therapist in treating a resistant child whose chief initial motivation for entering a relationship may be the opportunity to exploit a power figure, and for whom the perception of the therapist as powerless or neutral may completely block the development of a therapeutic relationship. Alt outlines his thinking and experience with the deliberate manipulation of the child's environment to stimulate the anxiety which can lead to effective self-exploration and eventual therapeutic gain. The clinician with residential treatment experience will recognize, and the sponsor or administrator should be made aware of, the problem of clashes between the goals of the professional staff and the child-care staff. These two groups often hold sharply conflicting value systems. Many such familiar problems are touched on and in the touching there is utility for the clinician entering the residential treatment setting for the first time. The clinician experienced in this setting, however, may find this book frustrating. For him the book will appear to raise issues of which he is aware without providing significant explication—certainly not enough to make the presentation valuable as a guide to the modification of his own work. Alt should be heard, but this book may not deliver his message. One might more easily recommend the reading of a series of his previous

Recent and forthcoming texts

PSYCHOLOGY

by ALLEN D. CALVIN, Office of the Director, Behavorial Research Laboratories, Palo Alto, Cal.; CHARLES HANLEY, Michigan State University; JAMES J. GALLAGHER, University of Illinois; F. J. McGUIGAN, Hollins College; MICHAEL J. SCRIVEN, Indiana University; and JAMES V. McCONNELL, Encyclopedia Britannica Center

A popular new book that brings together the writings of a select group of specialists. Each topic is discussed in a direct, clear, manner that the average undergraduate student can readily understand. Sections covered are: Scientific Method; Growth and Development; Experiencing the World; Learning, Retention, and Motivation; Personality and Social Behavior; and Professional Aspects of Psychology.

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by PAUL J. WOODS, Hollins College

This workbook is a study guide which is concerned entirely with helping the student to learn and understand the material in the text, **PSYCHOLOGY.** Each chapter has two sections: An open-ended outline of the text; and self-test multiple-choice questions. The answer section uses a unique, modified programming technique that gives the answer, the pages in the text dealing with the question, and a detailed explanation as to why alternative answers are incorrect.

COUNSELING: An Introduction

by DUGALD S. ARBUCKLE, Boston University

Using actual dialogues between a counselor and a client, this popular new book discusses the client and counselor, the general philosophy of counseling, and psychotherapy in the counseling process. The book accepts the increasing importance of the school staff, and is written primarily for the person who will function as a counselor in the school situation. The author is former President of the American Personnel and Guidance Association.

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of interest and importance

GROUPS IN GUIDANCE

by EDWARD C. GLANZ, Boston University

A 1962 publication that examines group theory and group research findings while also presenting practical applications of these ideas in all areas of counseling and guidance. Combines an interpretation of the contributions of up-to-date scientific research with tested school applications in elementary and secondary schools and at higher educational levels.

HUMAN DEVELOPMENT in Western Culture

by HAROLD BERNARD, Oregon State University

Treats human development from multiple, rather than single (experimental, descriptive, or psychological) approaches. Emphasis is on the converging of psychological, cultural, individual aspects of development to show the global nature of development. **To be published in Spring, 1962.**

THE CAUSES OF BEHAVIOR: Readings in Child Development and Educational Psychology

Edited by JUDY ROSENBLITH, Massachusetts General Hospital, and WESLEY ALLINSMITH, University of Cincinnati

Coming in Spring, 1962, this broad collection of recent articles covers the scope of present knowledge and the range of theory and method in psychology today. The editors' introductions highlight the ways in which the book reflects a series of theoretical positions. Book is designed for courses that combine human development and educational psychology.

PUPIL PERSONNEL SERVICES IN AMERICAN SCHOOLS

by DUGALD S. ARBUCKLE, Boston University

This is a 1962 revision of the author's popular text, GUIDANCE AND COUNSELING IN THE CLASSROOM. It is based on the A. P. G. A. study and report to the Ford Foundation. Book points up the need for highly qualified personnel to handle the services needed in today's schools. Emphasis is on the job of the counselor.

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papers which, to a greater degree than this work, are relatively clear and concise. Barring that, a reading of the several extensive case descriptions presented in this volume would probably provide more insight into Alt's treatment philosophy and suggest more about implementation than would a reading of his rather ponderous text.

Alt's views, as presented in this book, are based on many years of rich and intelligently absorbed experiences and as such are worthy of attention. It is unfortunate that the book was aimed at two audiences and may not have scored a direct hit on either.

God, Fact and Psychology

James E. Royce

Man and His Nature: A Philosophical Psychology. New York: McGraw-Hill, 1961. Pp. xiv + 398. $3.50.

Father James E. Royce, S. J. holds a master's degree from Gonzaga University and a licentiate in theology from Alma College. He did his doctoral work in psychology with fellow Jesuits Charles I. Doyle and Vincent V. Herr at Chicago's Loyola University. His interests range from problems of alcoholism and matters of mental health to the interrelations of theology, philosophy and psychology. Our Catholic reviewer, Raymond J. McCall, is Professor of Psychology and Director of the Guidance Center at Marquette University. Before World War II he took a doctorate in philosophy from Fordham University and after the war went to Columbia for a PhD in psychology. He has been teaching in Catholic colleges and universities for twenty-five years. Among his publications is a text book on logic and a monograph on the nature of psychology. He reports himself passionately devoted to the interstitial such as philosophical-psychological, clinical-statistical, and counseling-clinical. In 1956 he did a CP *review of Helweg's* Soul Sorrow. (CP, *Aug. 1956,* **1,** *234) The non-Catholic reviewer, Michael Scriven, is Professor of the Logic of Science in the Department of History and Logic of Science at Indiana University. He holds an MA in mathematics and philosophy from Melbourne University and a PhD in philosophy from Oxford. With Herbert Feigl and Grover Maxwell he was co-editor and co-author of the first two volumes of the* Minnesota Studies in the Philosophy of Science, *the titles of which indicate something of his interests:* (1) The Foundation of Science and the Concepts of Psychology and Psychoanalysis; (2) Concepts, Theories and the Mind-Body Problem. *The catholicity of his interests is further indicated by his involvement at the level of an expert with symbolic logic, methodology, parapsychology and automotive engineering. For* CP *he has done one review of three parapsychological books* (CP, *Oct. 1958,* **3,** *295f.) and another of a book on determinism and freedom in science* (CP, *Dec. 1959,* **4,** *380f.).*

Reviewed by Raymond J. McCall

This is an exposition of a Scholastic—largely Thomistic—philosophy of man by a Jesuit priest who is well trained and well read in contemporary psychology. Though it is in part a book *about* psychology, and as such of interest to psychologists, it is very rarely a book *of* psychology in the sense which we generally give to the term today.

Father Royce writes pertly, at times aphoristically, and he seems to have aimed his book chiefly at the undergraduate student in a Catholic college or university. The book thus seems to suppose some previous, and probably subsequent, exposure to Scholastic philosophy in the usual course structure of Jesuit colleges: logic, metaphysics, philosophy of nature, etc., and it employs modes of argument which will sound strange to most psychologists. The following passage is an example: "now from the principle of finality in general metaphysics we know that any form must have a purpose or reason for being the way it is. But since nothing except God is its own sufficient reason this form must be for the sake of something else. Consequently if knowledge were not followed by appetition, it would be utterly sterile" (p. 157).

As Father Royce sees it, the immateriality of the intellect, freedom of choice, and the nature of the human soul are the three pivotal problems for the undergraduate and to these he allots the major portion of his efforts and his available space. Though not as comprehensive as Fr. Klubertanz's *Philosophy of Human Nature* nor as close to the thought of St. Thomas as Fr. Reith's *Introduction to Philosophical Psychology*, it is certain to be better understood and appreciated by the undergraduates to whom it is addressed. It will also, this reviewer believes, commend itself more to contemporary psychologists since in its consideration of knowledge and motivation it constantly adverts to experimental and clinical findings. If Fr. Royce has brought out anything more clearly than previous books of philosophical psychology it is the appositeness of certain widely misunderstood Scholastic notions to current problems, and the proximity to Scholasticism of many principles espoused by such psychologists as Lashley, Murphy, Allport, Cantril, Hilgard, Symonds, and Woodworth.

Though as gentle, tolerant, and non-polemical as possible, Fr. Royce's book does not altogether escape the weaknesses of the apologetically oriented undergraduate textbook of philosophy: there is only a partial resistance to oversimplification, to rhetorical sallies, and there is a fondness for a kind of tutiary semantics which repeatedly labels its

own positions as "moderate," "factual," "based on evidence," "realistic," "fundamental," and the opposition's as "biased," "extreme," "emotional," "rank," and "misleading." Though sometimes willing to criticize the rigidity of Scholastic categories—as in the excellent discussion of habits—Fr. Royce seldom hesitates to accept the demonstrative force of medieval arguments designed to demonstrate by pure reason the immateriality and immortality of the human soul, its origin at the moment of conception by divine creative action, and similar doctrines which many Catholics would regard as more properly articles of belief than demonstrated truths. The failure to label such arguments as dialectical rather than apodictic detracts greatly, in the reviewer's opinion, from the autocritical stature to which books of philosophy written by believers should aspire; such a shortcoming leaves a book open to the charge of being more concerned with convincing than with proving.

Reviewed by MICHAEL SCRIVEN

ARE the Roman Catholic doctrines about man a) compatible with, and b) illuminating about, modern psychology? The affirmative answer is supported in this book by a Jesuit member of the APA, extremely well-informed about the theological and the scientific literature. He argues that the scientist actually needs and nearly always—surreptitiously or openly—espouses some general philosophical positions (pp. vi & 18); and he recommends the scholastic one which finds in Aristotle and Aquinas a sturdy and fruitful source for such a position.

It is exceptionally difficult for people concerned with the study of man to approach such a book objectively. If their commitments are in the direction of religion, they will welcome the extensive collection of quotations from prominent contemporary psychologists in support of various theological doctrines such as the immateriality of the soul and the freedom of the will. They will appreciate the attempts to translate the special vocabulary of Thomism into the terminology of the behavioral scientist; and they will sympathize with the motivation behind the choice of subjects and allocation of space which emphasizes religious rather than equally puzzling metascientific questions about the study of man. If the reader's commitments are self-assessed as empiricist-positivist-humanist, they will be confirmed in their worst suspicions when they find that the prominent "Supplementary Readings" bibliography refers only to Catholic authors; they will perceive the translated terminology as still laced with obscure and archaic terms, and they will dismiss with scorn or sorrow the attempt to salvage or rehabilitate doctrines from the thirteenth century.

Each of these reactions is understandable, but even together they miss the mark for an over-all appraisal. Such a book as this is justified, not by the absence of errors or prejudices, but by the presence of interesting ideas or points of view. The fact that some of its sound and significant arguments will be new to many professional psychologists makes it worth having on the book shelf; the fact that many of its most significant arguments are logically invalid makes its over-all point of view hopeless.

The material on the faculties, potentialities, substances, intellections, internal senses, degrees of immateriality of the intellect and soul, and many other sections are likely but not certain to be unrewarding to the *CP* reader, partly because they do not relate closely enough to problems that still carry a sting, and partly because they still need translation into psychologist's English. But the treatment of determinism and the freedom of the will, the motivation of choices, and the relation of philosophy to psychology, for example, is relevant and helpful in connection with many current debates.

THE logical errors are depressingly frequent and they noticeably increase in frequency during the attempts to defend theological doctrines such as the immortality of the soul. Here is one short example:

". . . we cannot account for man's superiority by any appeal to the sensory order. Brute animals can surpass man in every category of sense experience. The superiority must come from some other source" (p. 100). This is like saying that someone could not legitimately be judged valedictorian unless he scores at the top of the class in some subjects.

A more subtle error, but one which should not have escaped during fifty pages of discussion of choice-making is exhibited in this quotation: "The whole process of deliberation is nonsense if the decision is already determined" (p. 206). This assumes that a predetermined process cannot be a necessary condition for something. In a different area, the book's predictions about computers' ultimate performance, as one would expect, are very pessimistic; they are also already inaccurate. Chessplaying computers do not win by running through possible counter-moves (p. 101), chiefly since it would take over 10^{50} years. The commitment about the future of neurophysiology is likewise pessimistic, (p. 248-9) as are the views about the problem-solving behavior of animals (p. 357). At a methodological level, the view that direct experimental evidence should be sought out and treated with respect is often notably absent. The human soul is said to survive death for several different *a priori* reasons, plus the shocking argument from "nearly universal conviction" (p. 322): but people who investigate—and find wanting—the alleged direct evidence from mediums, seances, etc., are those who "usually approach the problem with a preconceived materialism" (p. 322).

Royce's views are often unsound, and his viewpoint is very alien to that of the better contemporary psychologists. This makes it easy to dismiss him, but in the judgment of this reviewer, most psychologists writing on these general questions fare no better than Royce and he has the advantage that the mistakes he makes are at least different.

These unconscious powers possess from the very first an inherent capacity of becoming conscious . . . Consciousness, therefore, does not exist from the first in any soul; it must come into existence gradually.

—F. E. BENECKE *(1798-1854)*

Parapsychology - English Style

Rosalind Heywood

Beyond the Reach of Sense: An Inquiry into Extra-Sensory Perception. New York: E. P. Dutton & Co., 1961 (first published as **The Sixth Sense**, London: Chatto and Windus, 1959). Pp. 224. $3.95.

G. N. M. Tyrrell

Science and Psychical Phenomena and Apparitions: In One Volume. New Hyde Park, New York: University Books, 1961 (first published London: Methuen, 1938 and London: Duckworth, 1953). Pp. xxi + 379 + 172. $7.50.

F. W. H. Myers, edited by **Susy Smith**

Human Personality and Its Survival of Bodily Death. New Hyde Park, New York: University Books, 1961 (first published in 2 volumes, London: Longmans, Green and Co., 1903). Pp. 416. $10.00. Introduction by Aldous Huxley.

Kenneth Walker

The Unconscious Mind. London: Rider & Co., 1961. Pp. 236. 21 shillings.

Reviewed by GERTRUDE R. SCHMEIDLER

The four authors and one editor of these four books are, or were, all British, and all are, or were, active in psychical research in England. Rosalind Heywood writes from no academic locale and, in a letter, describes her primary vocational concern as "the kitchen sink." G. N. M. Tyrrell, who died in 1952, was a physicist and mathematician who studied telegraphy under Marconi. F. W. H. Myers (1843-1901) was a classical scholar in Cambridge University and was one of the founders of the Society for Physical Research. Myers' editor, Susy Smith, is alive and is a professional writer. Kenneth Walker is a surgeon and a Fellow of the Royal College of Surgeons. Gertrude Schmeidler, the reviewer, is an American. She took an AB with J. J. Gibson at Smith College, an MA with Walter Hunter at Clark, and a PhD with E. G. Boring, Carroll Pratt and Dwight Chapman at the Harvard division of Radcliffe College. When Gardner Murphy paid a visit to Harvard and gave a seminar on "Psychical Research since William James," he struck a spark in Dr. Schmeidler; she has maintained a vital interest ever since in parapsychological research. Her book, ESP and Personality Patterns, *written in collaboration with R. A. McConnell, was recently reviewed in* CP *(Oct. 1958,* **3**, *295f). She is now an Associate Professor of Psychology at the City College of New York.*

—F. H. S.

A PARADOX of American parapsychology, following Rhine, has been that while its topics seem portentous and esoteric, its technique seems trivial. To someone who is bored by ESP cards, no matter how low the *p*-values obtained from guessing them, the English books here reviewed can provide a welcome change of pace. They retain the traditional three-fold emphasis on 'spontaneous cases' (apparitions, premonitions, telepathy and such), on mediums and other purportedly gifted 'sensitives,' and on quantitative experiments; their pages are filled with the anecdotes and case histories that make interesting reading. A concern with the philosophical implications of the material and its bearing on possible survival after death pervades all four. Their content is largely derived from the work of the (London) Society for Psychical Research.

Since three of the authors are identified with this remarkable organization, it probably should be described here. It was founded in 1882 by men who were eminent in their own scholarly fields, and who shared both an unwillingness to be duped and an enthusiastic curiosity about "those faculties of man, real or supposed, which appear to be inexplicable on any generally recognized hypothesis." The traditions of scholarship, of eminent leadership and of attitude have been maintained. The pages of the SPR's publications include major evidence for parapsychology and also incisive criticisms of this evidence and subtle counter-hypotheses. Constructive, and sometimes painstaking, major papers have been contributed by Lord Rayleigh, Crookes and Lodge among physicists, Bergson and Broad among philosophers, Lord Balfour the statesman, Driesch, Hardy and Walter among biologists, Gilbert Murray, the Sidgwicks and Andrew Lang among humanists, Richet, James, McDougall, Murphy, Thouless, and Burt among psychologists. The SPR's intellectual standards are high; it publishes both research papers on parapsychology and critiques which are scathing and frequently devastating.

But though the four books overlap in the content drawn from the SPR's *Journal and Proceedings*, they vary widely on several continua. The range in quality is from very good to very bad; in approach from technical to popular; in age from 1961 to a condensation of a 1903 classic. They require separate comment.

To someone who likes to scan the conclusions and summary of an article

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Edited by SEYMOUR M. FARBER, University of California Medical Center, San Francisco. 356 pages, $6.50 (cloth), $2.95 (paper).

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☐ READINGS IN PSYCHOLOGY: Understanding Human Behavior

Edited by JAMES DYAL, Texas Christian University, Available in late Spring.

Designed to supplement Sartain, North, Strange, Chapman: *PSYCHOLOGY: Understanding Human Behavior,* Second Edition, this collection of readings will help students increase their knowledge and interest in understanding human behavior from the psychological point of view. The articles selected illustrate how principles derived from scientific and clinical observations can be applied to the solution of everyday problems. Each chapter contains readings on the psychological aspects of the process under discussion; the important biological correlates of the psychological process, and socio-cultural determinants.

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before deciding if it is worthwhile to work through procedure and results, *Beyond the Reach of Sense* cannot be recommended too highly. What Mrs. Heywood sets before the reader is a consistently interesting digest and critical survey (unlike another recent book, Murphy's *Challenge of Psychical Research*, 1961, with its big chunks of the original reports). She describes much of the impressive mediumistic material, some of the spontaneous cases and experiments, and provides an appropriate context of philosophical speculations which preceded and followed the research, and of accounts of the backgrounds and personalities of the investigators. She writes with the detailed informed criticism of an expert and from the point of view of a convert.

The style of the book is charming: urbane, amusing, smooth. It reads as easily as a *New Yorker* profile, but its thinking is serious and even profound. The dust jacket quotes Sir Julian Huxley and Toynbee in praise; and the present reviewer concurs. However it seems necessary to add that while it is possible to accept almost all of Mrs. Heywood's evaluations, her arguments would not be satisfying to someone who has not already studied the reports on which they are based. For scientific study, this book is only an introduction.

Tyrrell is tougher. His major work, *Apparitions*, is here bound with an earlier provocative book. *Apparitions* surveys 61 reports of hallucinations described by individuals who are not diagnosed as psychotic, hallucinations which seem 'veridical' because they impart new information. Tyrrell examines the authenticity of the cases, looks for their common characteristics, criticizes other theories of them and propounds his own. His theory seems to postulate too much and explain or predict too little; but the reviewer knows of no better one. His critical thinking is tight; his problems are important; and the cases are fascinating.

The earlier book, *Science and Psychical Phenomena*, casts a wider net, covering mediumistic and experimental material as of 1938 and cases other than apparitional ones. It also shows both scholarship and intellectual integrity, but some of its evaluations are revised in *Apparitions* and many others are open to attack.

Myers' magnificent two-volume posthumous book, *Human Personality and Its Survival of Bodily Death*, has now appeared in a shortened form. This shortening, in the eyes of the present reviewer, has taken out its pith. In the original, case material and experiments were in the appendices, which totaled some 700 pages; and the fun of reading the book was to work through the appendix material, then turn to the text and conduct mental arguments with Myers. Smith's condensation retains Myers' long-winded speculations and incorporates into the text short uncorroborated statements of the more 'interesting' cases; it omits almost all the experiments and all the corroborative material. It thus keeps the reader from evaluating for himself the data on which Myers builds his exposition.

The original volumes pursued a different and intellectually exciting course. With the cited cases were included the raw material for critical evaluation: a statement of the follow-up investigations, of whatever corroborations or contradictions were found, and of corroboration which was sought but not obtained. Procedure and data of experiments were given in full. The reader was in a position to form his own conclusions; the weakness as well as the strength of the material was spread before him.

THE first sentence of the preface of Walker's *The Unconscious Mind* cites Dr. J. B. Rhine "of Dukes University, California" and sets the tone for the book as a whole. The "Unconscious Mind" of the title refers to parapsychological processes; the book gives a brief survey of psychic research.

The style is popular and makes for easy reading. Factual errors are frequent but are usually trivial: attributing Leibnitz's synchronized clocks to Descartes does not, for example, alter the trend of the argument about psychophysical parallelism. More disturbing are the overstatements and examples of slipshod reasoning, such as, "It is known, of course, that all depressant drugs, of the sodium amytal variety, are likely to lead to a lowering of the (ESP) score." Only a few, not "all" such drugs have been studied. Further, the fact that ESP scores are often far *below* chance expectation after the drug, makes it possible to suspect that the depressant might have two separable actions: making the subject negativistic to routine ESP tests while temporarily increasing his ESP ability. It is true that the net effect of such dual action would be 'psi-missing,' a lowering of the ESP score. However, on this hypothesis, ESP tests which mobilized a subject's deeper needs (instead of being routine) should result in higher ESP scores (instead of lower ones) after sodium amytal. Walker's "It is known, of course, that all . . ." would have been better stated as "It has been found, so far, that . . ."

The book will probably do little mischief. The general conclusions are largely consistent with those of a good many reputable men within psychic research. Anyone who accepts the conclusions on the basis of reading this book is fortunate not to have accepted even more outlandish ones. And anyone who rejects all of them merely because one surgeon is inaccurate has probably thrown away other babies with the bath water, and deserves to be intellectually childless.

De Senectute

Milton L. Barron

The Aging American: An Introduction to Social Gerontology and Geriatrics. New York: Thomas Y. Crowell, 1961. Pp. xviii + 269. $5.75.

Reviewed by ROBERT W. KLEEMEIER

The author, Dr. Barron, is Associate Professor in the Department of Sociology and Anthropology of the City College of New York and Chairman of that Department. Before that he was Professor of Sociology and Anthropol-

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ogy at Cornell University. He has published People Who Intermarry *(Syracuse Univ. Press, 1946),* The Juvenile in Delinquent Society *(Knopf, 1954) and* American Minorities *(Knopf, 1957). The reviewer, Dr. Kleemeier, is Professor of Psychology in Washington University in St. Louis. Before that he was Director of the Moosehaven Research Laboratory. He is a past president of the Division of Maturity and Old Age of the American Psychological Association and Secretary of the Gerontological Society. As editor he has just published* Aging and Leisure: a Research Perspective into the Meaningful Use of Time *(Oxford Univ. Press, 1961).*

—E. G. B.

THE output of gerontologic literature is growing at a faster pace than the much publicized increase in the gerontologic population. Shock's bibliography, a classic tool in the research on aging, published serially, threatens to engulf the entire *Journal of Gerontology.* Birren predicts that the number of scientific publications on the psychological and sociological aspects of aging during the next decade will equal or exceed the entire production prior to 1960.

Obviously this growth represents a burgeoning interest in the many fascinating problems associated with the adult years of life, particularly the later ones. Barron, in his preface, indicates his clear recognition of the implication of this development for higher education. Gerontology, he believes, will force its way into the university curriculum, particularly "in the offerings of departments of sociology and anthropology, psychology, social work and to a limited but significant extent also in the other divisions of social science." Indeed it already has. A 1957 survey by the Inter-University Council of Social Gerontology showed that 75 such courses were already being offered in some 52 different institutions. The number today undoubtedly exceeds 100.

Such courses need textbooks, and Barron had this demand in mind when he assembled this book. I say 'assembled' because eight of the 14 chapters are apparently in large measure reprints of earlier articles by Barron (sometimes in collaboration with sociologists Gordon Streib, Edward Suchman, and Philip Taietz) which appeared in various journals and publications during the period 1952-1958. In this way Barron has produced an interesting and suprisingly unified volume. Nevertheless the process has left an impress upon the book which is important particularly when one evaluates it as a course text.

This effect is seen most clearly in two ways, (1) there is a tendency in some chapters to support generalizations with references to early studies, although the addition of more current material would have been useful; (2) and there is a tendency in other chapters toward monographic presentations of certain of the author's research investigations. This criticism is not directed against the book as a valuable contribution to gerontologic literature, but it constitutes a limitation to be reckoned with in a text.

An illustration of the first of these tendencies is the neglect of the later findings of the Cornell study of occupational retirement, in spite of the fact that Barron himself directed this study in its early years. The later results of this research, as reported by Thompson and Streib in 1958, would have added much to the discussions of retirement planning and of the effects of retirement upon health. On the other hand, the section of the book dealing with gerontological research (chapters 6, 7, 8) presents in detail the results of Cornell surveys on attitudes toward retirement, and of rural and urban aged. This part is well done, an excellent primary source for some of the findings and data from these studies.

THERE are other interesting and significant contributions in the book. The presentation of the case for considering the aged as a quasi-minority group is convincing. Barron supports this argument by demonstrating that the aged satisfy many of the minority group criteria demanded by sociological theory, but that their inability to function as an independent group disallows this classification. Thus he considers them as a quasi-minority, rather than a true minority, group.

It will be interesting to see if Barron's attempt to gain currency for the term *social geriatrics* will be as successful as Tibbit's popularization of the term *social gerontology* has been. Following Fleming, a British sociologist, Barron contends that geriatrics should not be tied to a medical connotation, but as social geriatrics should aim "to secure the most efficient functioning of the older person in relation to other people by minimizing the individual and social handicaps of old age." One advantage of this dual terminology would be that it would gracefully enable the gerontologist, be he social or otherwise, to escape from the pressure of applied or service-oriented demands and to devote his energies to more purely scientific ends without anxiety or feelings of conflict.

An evaluation of *The Aging American,* considered as a text, brings out certain reservations which do reflect upon its use, although not upon it's quality. There is, of course, no satisfactory text for an undergraduate course in the psychology of aging or in social gerontology. The recent publication of the three handbooks of aging: J. E. Birren, *Handbook of Aging and the Individual* (Univ. Chicago Press, 1960; *CF,* Apr. 1961, **6,** 113-115); Clark Tibbitts, *Handbook of Social Gerontology* (Univ. Chicago Press, 1960); E. W. Burgess, *Aging in Western Societies* (Univ. Chicago Press, 1960) has made obsolete earlier attempts at texts on aging, and new efforts, backed by the tremendous scholarly labors of the handbooks, have yet to come to fruition. From now on, however, obsolescence will become chronic in this growing area. Books like *The Aging American* will, nevertheless retain their value as sources of fact and theory, and also for the guide lines that they establish for the future development of what may be described, in a word, as *social geriatrics.*

Gentlemen, the sciences are *humanities.*
—ERNEST BOREK

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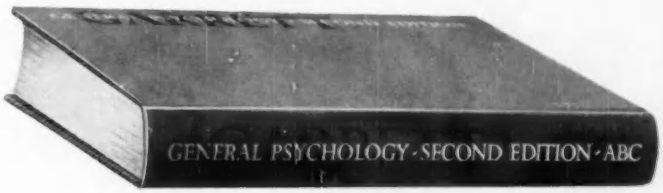

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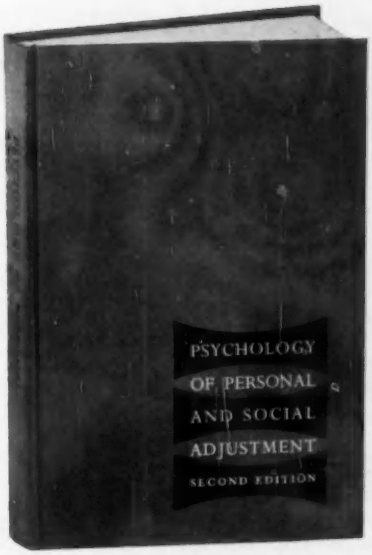

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The Child's Behavior and Psychoanalysis

Ruth S. Eissler, Anna Freud, Heinz Hartmann, and **Marianne Kris** (Eds.)

The Psychoanalytic Study of the Child. Vol. XV. New York: International Universities Press, 1960. Pp. 481. $8.50.

Reviewed by WALTER TOMAN

Five previous volumes of The Psychoanalytic Study of the Child *have been reviewed in* CP *(Oct. 1956,* **1,** *304; Apr. 1958,* **3,** *81-84; Jan. 1959,* **4,** *23f.; Jan. 1960,* **5,** *12f.; Feb. 1961,* **6,** *52f.). The last reference gives some information about the editors. This time the reviewer is Dr. Walter Toman, Associate Professor of Psychology at Brandeis University. He has lectured on child psychology, clinical psychology, and psychoanalysis at both the University of Vienna and Harvard University. He is author of* Einführung in die moderne Psychologie *(1951),* Dynamik der Motive *(1954), and* Introduction to the Psychoanalytic Theory of Motivation *(Pergamon Press, 1960).*

—E. G. B.

THIS periodical has probably a more diversified clientele of readers than other psychoanalytic and psychological periodicals. It is, itself, an unusual concoction of theorizing, clinical case reporting, and mélanges of the two—as when cases are assembled to demonstrate a more specific theoretical conclusion or when such a conclusion, already conceived, is scanned against clinical data.

While this periodical cannot claim theoretical or even editorial rigor—sometimes preliminary reports fill many pages and at times may do little more than announce the next, the real, paper—there is a confluence of relevant news that the reviewer has found duplicated perhaps closest in the Vienna Café. This is a place where people of different backgrounds and very different substance, but with a broad, somewhat speculative and yet rather subtle and pertinent interest in all aspects of man and humanity gather for all kinds of coffee, several glasses of plain, but tasty tapwater (which is free of charge), forty newspapers to which the Café subscribes, and above all for the chats with one another. Their topics include literature, science, the theater, music, politics, law, intrigues, local gossip, and interwoven with all of them, psychology. The Café is the place where "one can be away from home and still not in the fresh air," as a memorable customer once put it, although many cafés do have sidewalk tables too.

Well, by no sheer coincidence the editors of *The Psychoanalytic Study of the Child* have originally come from Vienna, and, while men tend to outnumber women, at least in those cafés that are said to matter, the strong representation of women among the editors and authors of this periodical is quite becoming in view of its chief subject matter: the child. Whether the lack of theoretical and editorial rigor is more a function of the women or of the Vienna Café, I cannot tell for sure.

IN the present volume of *The Psychoanalytic Study of the Child,* the most interesting theoretical contribution is J. Bowlby's paper on *Grief and Mourning in Infancy and Early Childhood* and the discussion of it. Bowlby has helped pave psychoanalytic theory's way into child psychology—and into life as it forms rather than as it appears in retrospect—perhaps more than any other one of the contributors to this periodical. In *Maternal Care and Mental Health* he has shown more systematically and in greater detail than others before him what realities of early life correspond to normal or psychopathological development of children. In a way he has articulated the general understanding among clinicians that neither Freud's assumption of actual trauma nor his later assumption of the irrelevance of the actual trauma in the etiology of neurosis is feasible by itself. A better assumption, which Bowlby has helped to promote empirically, is that there is no imaginary trauma without some actual trauma. Psychopathology is, moreover, always the result of trauma or loss, although in cases of constitutional weakness very light environmental discomforts can already constitute such losses.

In the present volume Bowlby attempts to account for something like the fact that too many of all those children who are being weaned develop inconspicuously or normally, and that postulations of strong instinctual dispositions do not necessarily constitute a good empirical or conceptual explanation of specific pathology. He says that it is not the loss of mother's breast, but the loss of mother, which may precipitate illness. And, if one finds that a mother-figure has been exchanged early in a child's life or that she lacked affection for the child and exercised unwise discipline, those determinants may have more to do with a particular form of pathology than, say, a 'strong anal-sadistic disposition.'

The discussants, Anna Freud, M. Schur, and R. Spitz, claim that Bowlby is too biologically oriented. His concept of attachment behavior (which is the one most deprived in case of loss of mother) is too behavioral and ecological. Instinctual response systems like crying, smiling, or clinging and following, should not be mistaken for instinctual drives. Bowlby, they say, has excluded the structural principle, the dynamic point of view, and the developmental stages or, if you like to be more outspoken, psychoanalytic theory itself.

It is true that motivation develops and the world forms (in the course of recurrent and variegated stimulation and gratification provided by adults and un-

Deterrents and Reinforcement

THE PSYCHOLOGY OF INSUFFICIENT REWARD

Douglas H. Lawrence and Leon Festinger

Leon Festinger's theory of cognitive dissonance is here applied to the problem of why partial reward, delay of reward, and effort expenditure during training result in increased resistance to extinction. The authors contend that a state of impasse exists within learning theory largely because some of its major assumptions stand in apparent opposition to certain well-established experimental results. They put forward in this book a new theory that seems to reconcile these data and assumptions. This new theory, the authors maintain, can account for data with which other theories have difficulty, it integrates empirical phenomena that have been regarded as unrelated, and it is supported by the results of experiments designed specifically to test its implications. A critical review is presented as well as new data on alternative explanations. $4.75

A Theory of Cognitive Dissonance

Leon Festinger

This book, first published in 1957, has been hailed as one of the seminal contributions to modern psychological theory. Stanford University Press is pleased to reissue it in a new printing. "A major theoretical statement on the general topic of communication and social influence. . . . The work is an impressive step in formalizing theory in the area."—*Annual Review of Psychology* (1959) "Rewarding and provocative. . . . An unusually coherent and stimulating approach to questions of persistence and change in attitudes and beliefs."—*American Sociological Review* "His theory of dissonance generates subtle, non-obvious predictions which cover a wide variety of phenomena that can be confirmed experimentally. This alone is a sizable achievement."—*Journal of Psychology.* $5.25

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der their auspices) in infinitely more complex and pliable ways with man than with the ecologists' pets (fish, birds, some mammals). It is also true that psychologists and some psychiatrists have been quite eager to borrow concepts and ideas from ecologists and have occasionally done so with rather inadequate results. I do not think, though, that Bowlby is guilty on either count. And, if he has demonstrated too much behavioral emphasis, there are several other papers in this volume for which this complaint could be made too: Mittelman's study of motility, Phyllis Greenacre's and Edith Buxbaum's tentative findings concerning some reality determinants of fetishism, and the whole chapter on organically impaired children. As a matter of fact, the lack of behavioral emphasis in several other papers of this volume is, if nothing else, undidactic. It would always be pleasant to know how an author establishes the degree of destructiveness of a person's superego, the level of ego-development, the amount of narcissistic involvement, of ambivalence, of overprotection or anxiety. One says this not in mistrust of an author's judgment, but to further still better articulation and more conscious and rational understanding of his thought. And I cannot see how that can be accomplished without more explicit reference to behavior —not, indeed, by reference to how a person stirs a given cup of tea today or how he proceeds to put on his coat tomorrow, but by the time he spends with a parent, the amount and severity of loss suffered by that parent, the number of changes of residence, the lengths and frequencies of solitary confinement, the arrival of siblings, and similar major characteristics of behavior.

So much for a gossipy glimpse of this conversation. For a more detailed appreciation the reader will have to come to the Café himself. And like other customers he will get stimulation rather than plain fact, more food for thought rather than a ready-made system of 'results.'

Materialism is the asymptote of psychology.

—GEORGE CHRISTOPH LICHTENBERG

The Roleless Role of the Aging

Ernest W. Burgess (Ed.)

Aging in Western Societies. Chicago: University of Chicago Press, 1960. Pp. xvi + 492. $7.50.

Reviewed by WOODROW WILBERT MORRIS

The editor, Dr. Burgess, took his PhD in sociology at the University of Chicago in 1913, has been teaching sociology there since 1916, and is now Professor Emeritus. He is the author of many books, including, with H. J. Locke, The Family from Institution to Companionship *(American Book Co., 1945), with Ruth Cavan and others,* Personal Adjustment to Old Age *(Science Research Associates, 1949), and with Paul Wallin* Engagement and Marriage *(Lippincott, 1953). The reviewer, Dr. Morris, is a Michigan PhD who has been at the State University of Iowa since 1948 and is now Associate Dean of the College of Medicine there and Professor and Director of the Institute of Gerontology. He is Vice-chairman of the Iowa Commission for Senior Citizens, a member of the Eexcutive Committee of the Inter-University Training Institute in Social Gerontology, and a member of the National Advisory Committee of the White House Conference on Aging.*

— E. G. B.

A YEAR or so ago I enjoyed what was to me the unique experience of observing a creative mind in the process of creating. The occasion was a meeting of the Inter-University Council in Social Gerontology, the body which planned and sponsored the publication of this volume. The moment was the discussion of a proposed volume on applied social gerontology which was being considered as a Council project. The creative mind—Ernest W. Burgess, professor emeritus of sociology, of the University of Chicago, considered by many as a 'pioneer of scientific sociology,' especially in the areas of family, criminology, and gerontology. Professor Burgess, in machine gun staccato, sketched out a topical outline with key content sentences for the entire volume in a matter of less than an hour! The book thus outlined has not been published; this reviewer hopes it will be, and by Burgess.

Aging in Western Societies "is a survey of the problems of older persons and of the solutions for their welfare adopted by societies of Western Culture." In presenting the data, the authors, of which there are ten besides Burgess, attempt to picture the economic and social trends which created the problems and the policies and programs which have been developed by six European nations (France, Italy, the Netherlands, Sweden, the United Kingdom, and West Germany) to promote the welfare of aging people.

The book is in three parts: Part I is the main text; Part II presents fourteen case studies; and Part III comprises fifteen selected statistical tables of comparative data on socioeconomic conditions and the aging in different countries.

Burgess is the editor, and also the author of three chapters "Aging in Western Culture," "Family Structure and Relationships," and "Résumé and Implications" and co-author with the social economist, Seymour L. Wolfbein, of a fourth "Employment and Retirement" of the eleven chapters in Part I. While psychology cannot lay claim to Burgess, it can look with pride on four other chapters written by psychologists Wilma Donahue "Housing and Community Services," Robert W. Kleemeier "The Mental Health of the Aging," Robert J. Havighurst "Life Beyond Family and Work," and John E. Anderson "Research on Aging." Other con-

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tributors include sociologists Philip M. Hauser and Raul Vargas "Population Structure and Trends," social worker and 'new frontiersman' Wilbur J. Cohen "Income Maintenance and Medical Insurance," and physicians Vera and Jerome Peterson "The Health of the Aging."

In his introductory essay, Professor Burgess provides a rich array of background factors against which to view aging in Western societies, but he is at his best in discussing the "Roleless Role of the Aging." This he describes as an "ideal construction," a conscious distortion with attention to the extremes of a situation. His purpose is to provide an instrument for the measurement of reality. "In this way the roleless role of old people today is contrasted with their significant role before the industrial revolution." The problem: to solve the present roleless role by inventing new patterns of activities and new roles with functional values for the person and for society. The remainder of the book surveys the progress Western countries are making toward this objective.

The conditions that are causally related to personal, social, and political concern for the aging in Western societies show both similarities and differences, but the similarities are the more striking. The fundamental characteristic is related to social change that accompanies transition from rural to urban living, from an essentially agricultural to an industrial society. This change is taking place at differing rates in various places in the United States. There is much to learn about these changes from the European experiences, many of which antedate American by a number of decades. For example, Bismarck instituted a program of governmental old-age insurance in Germany in 1889, almost five decades before the Townsend Movement in the United States!

Other similarities among Western countries have to do with changes in the economic structure as a result of the industrial revolution, the changes in the social structure, which always seem to lag behind technological and economic structure, and, as a consequence, the decline of the extended family and the trend toward the dependence of the aging upon organization, with the further consequence that the weight of responsibility has shifted from the children of aging needy parents to social (governmental) action.

The differences have mainly to do with the differential rates at which these changes have occurred in the several countries surveyed.

The major thematic conclusion is embodied in the following proposition: "The American way of life, if it is to be preserved for both older persons and all of us, is not merely to help older persons but to help them help themselves. Every program and project designed to promote the welfare of older people, particularly those originating in other countries, needs to be thoroughly scrutinized to determine if it will result in the dependency of the aging or in strengthening their independence and freedom of action."

No other book is available anywhere that contains such a wealth of factual information on this subject so carefully considered and evaluated. It is a fitting addition to its companion volumes, James E. Birren's *Handbook of Aging and the Individual: Psychological and Biological Aspects,* (Univ. Chicago Press, 1960; *CP,* Apr. 1961, **6,** 113-116), and Clark Tibbitts' *Handbook of Social Gerontology* (Univ. Chicago Press, 1960; *CP,* Sept. 1961, **6,** 308f.). All three of these volumes should be on the bookshelves of anyone even remotely concerned with aging.

"G M" (Great Man)

John G. Peatman and **Eugene L. Hartley** (Eds.)

Festschrift for Gardner Murphy. New York: Harper & Brothers, 1960. Pp. xii + 411. $6.00.

Reviewed by Goodwin Watson

The editors, Peatman and Hartley, had PhDs from Columbia twenty-five and thirty years ago and were Murphy's students there. They have both been colleagues of Murphy's during his dozen years (1940-1952) at the College of the City of New York, where both are now professors. Murphy has been at the Menninger Foundation since 1952. The reviewer, Goodwin Watson, is a friend of Murphy's who shares his interests. They were graduate students together at Columbia. Watson is now Professor of Social Psychology and Education at Teachers College, Columbia.

—E. G. B.

With this 26-layer cake, friends, former students and associates salute Gardner Murphy on his 65th birthday. The letter of transmission from the editors, "John and Gene," pays respect to one "born in the Nineteenth century, a product of the Twentieth, and indeed a citizen of the Twenty-first."

In the first chapter, Hartley studies Murphy as a model teacher, rated 'best-liked' by several generations of City College students, and ranking second only to Freud in a poll of American psychologists on whose work had been most influential in leading the respondent to become a psychologist. His technique is more as "friendly helper" than as "devastating critic." He has frequently been able to find the one seed of promise amid all the chaff of a student's paper and then warmly to encourage the novice to aspire to broader knowledge, firmer grasp, and more intensive development of this bit of promise. Hartley characterizes Murphy's lectures as addressed to the top 5% or 10% of the class, and as drawing upon an immense range of knowledge: "in a single hour to use illustrative material from ancient Japanese art, medieval European agriculture, eighteenth-century English philosophy, contemporary New England home-life, as well as from recently published and unpublished research by psychologists, physiologists, and geneticists."

It is appropriate that the testimonial volume should be characterized primarily by its extraordinary range of interests. Canalization, subliminal activation, ESP, Prägnanz, social perception,

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About 600 pages	*An early Spring 1962 publication*

CONTEMPORARY READINGS IN GENERAL PSYCHOLOGY

Robert S. Daniel, Editor

In this text, adopted by more than 125 colleges and universities, a wide selection of readings by leading scholars offers answers that masters of modern psychology give to the insistent problems of the field.

385 pages	*Paper Covers*	*1959*	*$3.50*

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reciprocal attraction, ethnic labeling, latitude of acceptance, value systems, tall vs. flat industrial structures, perceptual defenses, psychological stress, leveling, factor analysis of 'colon' and 'ulcer' types, and attitudes toward death are all considered or reconsidered. While the variety of themes suggests that catholicity of APA conventions, there is none which cannot connect with some of Murphy's writing.

The inevitable difficulty faced by editors of such a compilation is that few of Murphy's former students, colleagues, and present admirers can produce on demand a piece which makes a contribution worthy of the master. It is easy to imagine the predicament of most of the writers. They would like to dedicate a significant piece to 'G. M.,' but at the moment they do not have one in mind. So they either summarize findings published elsewhere or outline some further questions which someone might well study. A few of the contributors were in the more fortunate position of having new research just ready for publication. Noteworthy is Sherif's evidence that individuals holding extreme positions on an altitude continuum have a high "latitude of rejection," displacing neutral and moderate statements toward the position they reject. Controversial is Maslow's contention that our delinquency rate is higher than the Mexican mainly because the Mexican father has a strong clear masculine role. Interesting is Holzman's observation that all six of twenty subjects who were rated as highly repressed on the basis of Rorschach records, were "levelers" in re-telling a story.

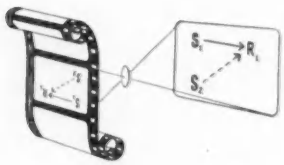
The inevitable lack of integration in the Festschrift contrasts with Gardner Murphy's exceptional ability to weave diverse findings into a well-balanced and unified presentation.

One must learn to read in self defense. If 90 per cent of the population carry pistols, it will not do for the remaining tenth to go unarmed.

—J. McKeen Cattell

INSTRUCTIONAL MEDIA

Edited by A. A. Lumsdaine



TV, Fantasy, and Reality

Wilbur Schramm, Jack Lyle and **Edwin B. Parker**

Television in the Lives of Our Children. Stanford, California: Stanford University Press, 1961. Pp. vii + 324. $6.00.

Reviewed by Lotte Bailyn

The senior author, Professor Schramm, is Director of the Institute for Communication Research at Stanford University. Of his numerous publications in the field of mass communications, CP *has previously reviewed* Text Materials in Modern Education, *which was written in collaboration with R. Bierstedt, R. McMurray, and W. B. Spalding, and edited by L. Cronbach* (CP, *March 1956,* **1,** *87). He has also served as a reviewer* (CP, *November 1959,* **4,** *357). Lyle and Parker, his co-authors, are both Assistant Professors at Stanford, in the Graduate School of Journalism and the Institute for Communication Research, respectively. The reviewer, Dr. Bailyn, is Research Associate in The Laboratory of Social Relations at Harvard University. She is a Swarthmore BA and a Radcliffe PhD, and has published some of her own work in communication research in a monograph,* "Mass media and children: a study of exposure habits and cognitive effects" (Psychol. Monogr., *1959,* **73**).

With the publication of this book, American social research has finally caught up with the British in a most important area. For the only study on television and children similar in scope to the present one is that done in England by Hilde T. Himmelweit, A. N. Oppenheim, and Pamela Vince, the results of which were published in *Television and the Child* in 1958.

The present book is a summary of eleven studies carried out between 1958 and 1960. Information for these studies was gathered "from 5,991 students, 1,958 parents, and several hundred teachers, officials, and other knowledgeable persons in ten communities in the United States and Canada, representing cities and towns, metropolitan areas and isolated areas, industrial, agricultural, and residential communities, and every major condition of television development now to be seen in North America including the condition of *no television.*" The results from this body of material, as well as from other research on the same topic, are summarized in this book. The text itself—covering approximately two thirds of the pages—is written in a non-technical style with a minimum of figures and tables. The more detailed description of procedures and presentation of findings are found in the 100 pages of appendices.

On the whole, the information sought by the investigators (mainly by means of written questionnaires, though personal interviews were also used) was fairly standard: amount of time spent with each medium; program and medium preferences; the situation of exposure (alone or with others); apportionment of leisure time; the usual demographic information; and IQ. The first few chapters of the book represent the analysis of this material. They contain detailed information on the amount of time children spend with television; the manner in which television has reorganized their leisure time; the atti-

tudes children have toward the medium; and the types of programs they most enjoy. Age, sex, mental ability, and the status and media habits of the family are all shown to be related to these questions in a meaningful pattern. These chapters, then, present a detailed answer to the question of the place that television has in the lives of children. And though the findings are not unexpected or very different from those of previous, less comprehensive researches, the fact that they are based on such a large body of material gives one confidence that they represent the situation as it actually is.

What effect does this involvement with television have on the child? The question of specific learning was the main one provided for in the design of these studies. An example of what the writers found in this area is that children who entered the first grade after watching television during preschool years had a better vocabulary than those who had no television experience. The difference, however, disappears in a few years. The last substantive chapter on "The Effects of Television" in which the authors discuss these and other findings, as well as those of earlier studies conducted by other investigators, is a useful summary of what is known about this pressing problem. A premise of the discussion is that effects of television will be the result of an interaction between the child and television. No effects—whether physical, emotional, cognitive, or behavioral—can be attributed solely to television. Quite the contrary: what the child brings to his television experience is usually more important.

In the middle of the book—between the first few descriptive chapters and the chapter on effects—the authors concentrate on process and dynamics. It is here that the newest and most interesting points emerge.

Having shown that television mainly meets the fantasy needs of children, and print media the reality needs, the authors proceed to combine exposure to these two media into a four-fold classification: "fantasy group" (high users of television, low users of print): "reality group" (high users of print, low users of television); "high users group (high users of both media); and "low users group" (low users of both). The authors first investigate in great detail the relation of these groups to age, sex, socio-economic status, and mental ability. The relationships they discover lead them to hypothesize a process of change in the early teens from pleasure gratification to reality-seeking. This change is most apparent among children from homes of higher socio-economic status, a finding which leads the authors to ask some interesting questions.

They interpret socio-economic status as representing social norms: families with high socio-economic status have a norm of future-orientation and delay of gratification; families with low socio-economic status function more on the basis of a norm of present-orientation and immediate gratification. The authors therefore inserted questions into one of their studies concerning the child's acceptance of one or the other of these norms, and found that reality use of the media is related to the social norm of future-orientation, fantasy use of the media accompanies the norm of present-orientation.

The authors continue to use this four-fold classification—emphasizing the fantasy oriented group—in analyzing the personality variables incorporated into their study. These variables are meant to represent the child's social relationships, and consist of measures of six types of aggression and a measure of conflict with peers and parents over the child's aspirations. "Aggression anxiety"—a desired result of socialization in our culture—is highest in the reality group; "antisocial aggression" is highest in the fantasy group. ("Anti-social aggression" also differentiates the older children of highest socio-economic status who are fantasy users from their counterparts who follow the modal pattern of reality use.) Similar analysis shows that parental and peer group conflict is associated with fantasy seeking in the teen years.

The chapter in which these results are presented and interpreted is the most revealing in the book. It shows that psychological variables can be built into the structure of what the authors call a "large-scale gross study," and indicates what a sophisticated empirical analysis can do with them. Indeed, it belies the authors' view that such a study "has the disadvantage of not being able to concentrate on the details of process or dynamics."

With this example before him, the reader of this book finds himself speculating about other possibilities. There are, for instance, other provocative variables mentioned in the summary of procedure but not in the text: an introversion scale; some "value" questions (not otherwise identified); a series of questions "which it was hoped might tap feelings of insecurity about the world in which the student lives: questions about possibility of war, estimate of the number of murders committed weekly in the United States, etc." These questions may not have yielded first-order differences and hence were not used in the analysis. But what about a deeper analysis? Perhaps a child who is insecure about the world in which he lives escapes into the fantasy of television only when no realistic source of reassurance is available to him: when he has conflicts with his parents, for instance.

If there were any question that this kind of analysis of the "large-scale gross study" yields insight into process and dynamics, the authors' chapter on "Television and Social Relations" should answer it. One regrets only that the authors included in the original design of their studies so few of the variables needed for such analysis.

The book concludes with an essay by Lawrence Zelic Freedman entitled "Daydream in a Vacuum Tube: A Psychiatrist's Comment on the Effects of Television," an essay containing a number of challenging hypotheses, some of which are supported by the data in the empirical sections, others of which could be tested by future research. The book also contains a useful annotated bibliography on studies of children and television.

Like the solar system, the ego is a going concern.

—John Money

ON THE OTHER HAND

In this Department CP *invites discussion of reviews and of books reviewed. Here is the place for that kind of intellectual dissent that promotes progress in understanding. Let your criticism be* ad verbum, *not* ad hominem. *Seldom does a criticism merit more than half the space of the text criticized—never more than equal space and then only when the letter is interesting and well written.* CP *edits letters when it thinks they should be. Single-spaced letters will be returned for double-spacing.*

AD VERBUM VERSUS AD HOMINEM

We have found *CP* to be the most interesting of all psychological journals, primarily because of the Editor's policy of promoting dissent. As a result, we have had little sympathy for letters protesting unfavorable reviews merely because they are unfavorable.

Nevertheless, we feel that comment should be made about Dr. Paul Meehl's review (*CP*, Nov. 1961, **11**, 389-391) of *Clinical Inference and Cognitive Theory* by Sarbin, Taft, and Bailey. We do not dispute Dr. Meehl's right to be critical of the book, and do not wish to engage in an argument about the merits of the book. What we do wish to reflect is some concern over the extremely hostile tone of the review and the persistent ad hominem attacks on the authors.

It is clearly possible to write a critical review without attacking the authors' intelligence or integrity. An excellent example of such a review was written by Dr. Harrison Gough concerning Koch's Volume Three (*CP*, May, 1961, **5**, 154-156). In this review conclusions were drawn just as unfavorable as those reached by Meehl, but without any of the personal animosity as expressed in the above review. We find a striking contrast between these reviews and suggest that future unfavorable reviews follow such an example as that set by Dr. Gough.

JAMES M. RICHARDS, JR.
VICTOR B. CLINE
University of Utah

Richards and Cline sent their letter to CP_1 who recommended to CP_2 that the letter be printed. CP_2 then asked CP_1 to comment, so here goes.

CP_1 has for these six long years been set against ad hominem criticism in its pages, and by that it meant that the pages of *CP* are not properly given to the disparagement of the intelligence or integrity of anybody not yet one hundred years dead—neither author nor reviewer. On the other hand, the integrity of *CP* requires that those who form the thought upon its pages should be free to say what they believe about the contents of any book. Their values may be idiosyncratic but they must be free, restrained by the rule of ad verbums only and by the threat of counter-criticism. Criticize the book and not the man—at least not the whole man.

But books are written by men. How can you disparage the contents of a book without having depreciated its author? You cannot. There is this difficult intermediate class of disapprobations: aspersion by hominized ad verbums. By my count Meehl expressed his regrets about this book in 13 of these hominized aspersions and 10 straight-armed ad verbums. The difference, however, is little more than the difference between the active and the passive voices. "Although aware of Reichenbach's distinction between the contexts of discovery, they seldom make it . . ." That *they* is Sarbin, Taft, and Bailey receiving an ad hominem, as Richards and Cline would say, but really only a hominized ad verbum. It is the book's words that are under attack, not anything that the authors will necessarily carry into their home lives. "Empirical knowledge is grossly oversimplified by identifying all non-deductive inference with possible 'induction.' This is the book's core mistake." Ad verbum, that. It was the book that made the mistake; Meehl said so.

Is it not clear? Richards and Cline want to deny the book's umbilical cord, to condemn the reviewer to the impersonal passive when the personal active is both more interesting and truer. Meehl the logician is a tough guy. Should he not say what he thinks about a book? Would the authors have suffered less because the pronouns for them were forced out of Meehl's sentences? Why not welcome the ad verbums, exclude the ad hominems, and accept the ad auctorems? The author qua author must stand back of his words. And if his attacker be unfair, let the author hope for a Daniel to reverse the judgment in *On the Other Hand*. Or perhaps for Richards and Cline.

EDWIN G. BORING
Harvard University

SUPPORT FOR SUMMERHILL

I know of at least one psychologist who was persuaded not to waste his time on "Summerhill" by A. S. Neill after reading Hartup's review (*CP*, Oct. 1961, **10**, 347-348.). After reading the review myself, I suspect that this is not an isolated instance and this is, in my opinion, most unfortunate. Granted that there is little scientific evidence in support of most of Neill's statements and that his writing style is more reminiscent of Freud than Hull, this report of forty years of experimentation of a type few psychologists have the courage to attempt certainly merits widespread consideration.

NORMAN E. WALLEN
University of Utah

BOOKS RECEIVED

AUDIO-ETHICAL PUBLICATION. (Recording) *Learn to relax, spoken by Patrick O'Byrne*. Johannesburg, S. Africa: Troubadour Records, Ltd., 1961.

BASSETT, MARION. *A new sex ethics and marriage structure: discussed by Adam and Eve*. New York: Philosophical Library, 1961. Pp. ix + 332. $6.00.

BATESON, GREGORY (Ed.) *Perceval's narrative: a patient's account of his psychosis 1830-1832*. Stanford, Calif.: Stanford University Press, 1961. Pp. v + 331. $6.75.

BIRNBACH, MARTIN. *Neo-Freudian social philosophy.* Stanford, Calif.: Stanford University Press, 1961. Pp. v + 283. $6.00.

BLOCK, JACK. *The Q-sort method in personality assessment and psychiatric research: a monograph.* Springfield, Ill.: Charles C Thomas, 1961, Pp. vii + 161. $6.75.

BLUMENFELD, WALTER. *Psicologia del Aprendizaje, un libro para maestros y estudiantes.* Lima, Perú: Universidad Nacional Mayor de San Marcos, 1961. Pp. 240.

BROMBERG, WALTER. *The mold of murder: a psychiatric study of homicide.* New York: Grune & Stratton, 1961. Pp. v + 230. $4.75.

BUROS, OSCAR KRISEN (Ed.). *Tests in print: a comprehensive bibliography of tests for use in education, psychology, and industry.* Highland Park, N. J.: The Gryphon Press, 1961. Pp. vii + 479. $7.00.

CLEUGH, M. F. (Ed.). *Teaching the slow learner in the special school.* New York: Philosophical Library, 1961. Pp. v + 338. $10.00.

CONANT, JAMES BRYANT. *Slums and suburbs: a commentary on schools in metropolitan areas.* New York: McGraw-Hill, 1961. Pp. 147. $1.95.

DE GENNARO, ANGELO A. *The philosophy of Benedetto Croce.* New York: Philosophical Library, 1961. Pp. v + 103. $3.00.

DETHIER, V. G. & ELIOT STELLAR. *Animal behavior: its evolutionary and neurological basis.* Englewood Cliffs, N. J.: Prentice-Hall, 1961. Pp. v + 118. $1.50.

EBIN, DAVID (Ed.). *The drug experience: first-person accounts of addicts, writers, scientists and others.* New York: The Orion Press, 1961. Pp. ix + 385. $5.95.

EISSLER, RUTH S. et al. (Eds.). *The psychoanalytic study of the child, Vol. XVI.* New York: International Universities Press, 1961. Pp. 563. $8.50.

ELLIS, ALBERT & ROBERT A. HARPER. *A guide to rational living.* Englewood Cliffs, N. J.: Prentice-Hall, 1961. Pp. 195. $4.95.

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References are made to the experimental literature to illustrate the text, but technical jargon as well as theoretical controversy is avoided. In view of the widespread interest in the applications of psychology and in careers in psychology, the text contains numerous references to the types of applied problems that psychologists have encountered and to the scientific bases for their solution. *A volume in a Psychology Series edited by J. McV. Hunt. Student Guide and Workbook, Instructor's Supplement available. 1962. 520 pp., illus.* $6.50

The Psychology of Abnormal Behavior

LOUIS P. THORPE and BARNEY KATZ, both University of Southern California; and ROBERT T. LEWIS, Los Angeles State College.
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This introductory textbook describes the nature and dynamics of abnormal behavior in simple, readable form, with terms and concepts systematically defined and clarified. Emphasis is placed on the inter-relationships among stress, personality, and adjustive reactions, with attention to physiological, psychological, and sociological forces. Book presents divergent views concerning the nature and operation of dynamic factors; considers normal as well as aberrant behavior patterns. 94 case studies illustrate the various personality disorders and behaviors. *2nd Ed., 1961. 677 pp., illus.* $7.50

Human Factors in Jet and Space Travel

Edited by S. B. SELLS, Ph.D., Texas Christian University; and* CHARLES A. BERRY, *M.D., Lt. Col., USAF (MC), Chief, Flight Medicine Branch, Aerospace Medicine Division, Office of the Surgeon General, USAF, Washington, D. C.

A medical-psychological analysis of human-factor aspects of space travel and high-speed and high-altitude jet flight. Based upon a wide range of experimental data, book covers psychological problems to be faced in selecting and training crews, the abnormal mental strains recognized and anticipated, group behavior problems in flight, basic aspects of skilled performance, etc. The problems of flight are approached from the practical viewpoint of establishing standards, techniques, and objectives for dealing with them. *13 Contributors. 1961. 386 pp., illus.* $12.00

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GIBSON, EVELYN & S. KLEIN. *Murder: a home office research unit report.* London: Her Majesty's Stationery Office, 1961. Pp. iii + 43. 4s. net.

GORDON, WILLIAM J. J. *Synectics: the development of creative capacity.* New York: Harper, 1961. Pp. ix + 178. $4.50.

HENDRICK, IVES (Ed.). *The birth of an institute: twenty-fifth anniversary of the Boston Psychoanalytic Institute.* Freeport, Maine: The Bond Wheelwright Co., 1961. Pp. v + 164. $5.00.

HOOK, SIDNEY (Ed.). *Religious experience and truth: a symposium.* New York: New York University Press, 1961. Pp. vii + 333. $5.00.

L'Année psychologique. (Journal). Paris, France: Presses Universitaires de France, 1961. Pp. 312.

LOCKE, NORMAN. *Group psychoanalysis: theory and technique.* New York: New York University Press, 1961. Pp. v + 253. $6.50.

LOWENTHAL, LEO. *Literature, popular culture, and society.* Englewood Cliffs, N. J.: Prentice-Hall, 1961. Pp. vii + 169. $1.95.

MANN, DAVID, LUTHER E. WOODWARD, & NATHAN JOSEPH. *Educating expectant parents: some observations and recommendations based on a research study.* New York: Visiting Nurse Service of New York, 1961. Pp. v + 223. $4.50.

MASON, RUSSELL E. *Internal perception and bodily functioning.* New York: International Universities Press, 1961. Pp. 485. $8.50.

MAYER, GRETA & MARY HOOVER. *When children need special help with emotional problems.* New York: Child Study Association of America, 1961. Pp. 30. $ .40.

MICHAL-SMITH, HAROLD & SHULAMITH KASTEIN. *The special child.* Seattle: Bureau of Publications, 1961. Pp. 334. $5.50.

NATIONAL ASSOCIATION FOR MENTAL HEALTH, Inc. *Out-patient psychiatric clinics: and other mental health resources in the United States.* New York: National Association for Mental Health, Inc., National Institute of Mental Health, National Institutes of Health, Public Health Service, & U. S. Dept. of Health, Education, and Welfare. Pp. 200. $1.50.

OLYANOVA, NADYA. *The psychology of handwriting.* New York: Sterling Publishing Co., Inc., 1961. Pp. 224. $1.35.

OSBORN, ARTHUR W. *The future is now: the significance of precognition.* New Hyde Park, N. Y.: University Books, 1961. Pp. 254. $6.00.

POMERAT, CHARLES M. (Conference Ed.). *The use of animal cell, tissue, and organ cultures in radiobiology.* New York: Academy of Sciences, 1961. Pp. 743-1020.

RUESCH, JURGEN. *Therapeutic communication.* New York: W. W. Norton, 1961. Pp. xii + 340. $6.50.

RUNES, DAGOBERT D. *The art of thinking.* New York: Philosophical Library, 1961. Pp. 90. $2.75.

RUSSELL, BERTRAND. *Education of character.* New York: Philosophical Library, 1961. Pp. 160. $3.75.

RUSSELL, W. RITCHIE & M. L. E. ESPIR. *Traumatic aphasia: a study of aphasia in war wounds of the brain.* New York: Oxford University Press, 1961. Pp. 177. $9.00.

SANFORD, NEVITT (Ed.). *The American college: a psychological and social interpretation of the higher learning.* New York: John Wiley, 1962. Pp. v + 1084. $10.00.

SCHMIDTKE, HEINZ & HUGO SCHMALE. *Arbeitsanforderung und Berufseignung.* Germany: Hans Huber, 1961. Pp. 87.

SKLARE, MARSHALL (Ed.). *The Jews: social patterns of an American group.* Glencoe, Ill.: The Free Press, 1960. Pp. v + 669. $10.00.

SMITH, DONALD E. P. (General Ed.). CARL HAAG, RODERICK A. IRONSIDE, ROSEMARIE E. NAGEL, ANNE R. CROSS, DANIEL G. SAYLES, & JOHN E. VALUSEK, *Learning to learn.* New York: Harcourt, Brace & World, 1961. Pp. v + 143. $1.95.

U. S. DEPT. OF HEALTH, EDUCATION, AND WELFARE. *A manual on record keeping and statistical reporting for mental health clinics.* Washington, D.C.: U. S. Dept. of Health, Education, and Welfare. Pp. 72. $ .45.

U. S. DEPT. OF HEALTH, EDUCATION, AND WELFARE. *Planning of facilities for mental health services: goals, principles, action.* Washington, D.C.: U. S. Government Printing Office. Pp. 55. $ .40.

WALKER, KENNETH. *The extra-sensory mind.* New York: Emerson Books, 1961. Pp. 256. $3.95.

WASHINGTON STATE DEPARTMENT OF HEALTH. *A pattern for effective consultation.* Seattle, Washington: Washington State Public Health Association, second printing, 1961, Pp. 23. $ .50.

WOOLMAN, MYRON. *Programming for conceptual understanding: a self-instructional program in basic electricity.* Washington, D.C.: Institute of Educational Research, 1961. Pp. ii + 211.

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—SAMUEL JOHNSON, *1775*

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An Introduction to Programed Instruction

by William A. DETERLINE, American Institute for Research

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